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Henry Sweet Lecture 2015

Why underlying representations?

Larry Hyman (UC Berkeley)

Phonology is a rapidly changing and increasingly varied field, having traveled quite some distance from its original structuralist and generative underpinnings. In this paper I address the status of underlying representations (URs) in phonology, which have been rejected by a number of researchers working in different frameworks. After briefly discussing the current state of phonology and the assaults on URs from phonetics on the left and morphology on the right, I turn to the consider the arguments in favor vs. against URs. Citing very straightforward (possibly non-controversial) cases, I then consider the arguments against URs, which appear to accuse URs of being (i) wrong; (ii) redundant; (iii) indeterminate; (iv) insufficient; (v) uninteresting. Distinguishing two distinct goals in linguistics which I refer to as determining "what's in the head?" vs. "what's in the language?", I suggest against some rather strong opinions to the contrary that URs are an indispensable and welcome tool offering important insights into the typology of phonological systems, if not beyond.

Mapping morphological complexity across the Daly River languages of northernn Australia

Rachel Nordlinger (University of Melbourne)

Morphological complexity has been the subject of much discussion in the literature in recent years (e.g. Ackerman & Malouf 2013, Baerman, Brown & Corbett 2015, Dahl 2004, Dressler 2011, Miestamo, Sinnemäki & Karlsson 2008, Stump & Finkel 2013), yet there is still much to be discovered about what it actually entails, how it can be measured, and how it should be defined. Many have argued for the need to distinguish a notion of complexity from the perspective of a language learner from an objective measure of complexity, which considers the nature of the system and the amount of information or theoretical structure needed to describe it (e.g. Miestamo's (2008) 'absolute' vs 'relative' complexity). Yet, there is much still to be determined about how these two types of complexity interact. Dahl (2004) has argued that the parts of the system that may be considered more complex in an absolute sense – the more mature parts of the system – are often more highly stable, suggesting that they are not especially difficult to process or problematic for children to learn.

In this paper I use the languages of the Daly region of northern Australia to explore these different approaches to morphological complexity, and their interaction. The Daly region is linguistically diverse yet, in comparison to other regions of Australia, significantly underdescribed. All 10 to 12 languages of the region show features characteristic of polysynthesis, including head-marking and noun incorporation, although as we will see, the nature of these polysynthetic features varies across the languages in interesting ways. I show that these languages also exhibit all of the properties of morphological complexity in the literature (e.g. Miestamo 2008; Anderson 2015), and rate as highly complex on quantificational measures of morphological complexity (Mansfield & Nordlinger 2015). However, across the region morphological complexity appears to have increased through areal diffusion and contact (cf. Dahl 2004). Furthemore, I discuss recent work on the acquisition of one of these languages, Murrinhpatha, which provides interesting evidence that common notions of complexity may not accurately reflect that which is hard for the child to learn. The Daly languages therefore, provide us with interesting examples of how complex a language's morphology can be, as well as having broader implications for our notion of morphological complexity and how it should be defined cross-linguistically.

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Workshop of the current status of underlying representations in phonology

Organised by John Harris (UCL) & Larry Hyman (UC Berkeley)

Phonology is a rapidly changing and increasingly varied field, having traveled quite some distance from its original structuralist and generative underpinnings. In those days the concerns of the ordinary traditional phonologist might be summarized as ”what’s the underlying form, and how do we bring it to the surface?” In many circles today, however, there has been a relative lack of interest in questions of representation–and for different reasons. On the one hand, the output-driven nature of optimality theory and its concept of the richness of the base have placed the emphasis on motivating surface forms, with some going as far as to insist that all constraints be grounded in the phonetics–and that there are no underlying representations. At the other end, there’s been the assault from morphology: alternations that traditionally justified abstract morphophonemic (”systematic phonemic”) representations are now often viewed as non-automatic morphologically conditioned ”rules”, if not allomorphy, ”constructions”, or ”lexical organization”. At the same time, focus has shifted from the traditional techniques of phonological analysis which have been increasingly enhanced, if not replaced by experimental, instrumental, statistical and computational approaches to the study of sound systems. As a result, the boundaries between phonetics and phonology, on the one hand, and phonology and morphology, on the other, are as unclear as ever. In this workshop, papers are sought that address the current status of underlying representations in phonology: Do we need abstract lexical representations? phonemes? morphophonemes? something else? If yes, why? If no, what do we put in their place? Another way to think of it is to return to Kiparsky’s old question, ”How abstract is phonology?” How do current models of phonology which invoke strata and/or underspecification, ranked constraints, empty elements, principles of various sorts etc. bear on the issue of underlying representations in phonology?

Surface forms cue shared input representations, not each other

Ricardo Bermúdez-Otero (University of Manchester)

In this paper I analyse two phenomena that have been claimed to involve paradigmatic dependencies without cyclic containment: stress in English dual-level affixation (Steriade 1999: §2-§3, Raffelsiefen 2004) and Romanian palatalization (Steriade 2008). In English, the stress alternation in ***r**émedy ~ rem**é**di-able* is connected with the existence of *rem**é**di-àte*; cf. *p**á**rody ~ p**á**rodi-able*, **par**ó**di-able ~ *par**ó**di-àte* (Raffelsiefen 2004: 135, cf. Steriade 1999: §2). In Romanian, the application of palatalization in the derivative [stɨnʤ-íst] 'left-ist', from *stânga* [stʲɨŋg-ʌ] 'left_hand', depends on its predictable application in the inflected form [stʲɨnʤ-i̯̯] 'left_hand.PL'; cf. [fók] 'fire' ~ [fók-ur-i̯̯] 'fire.PL' ~ [fok-íst], *[foʧ-íst] 'locomotive engineer' (Steriade 2008: 320-25). These paradigmatic connections are surprising because *remédiàte* and [stʲɨnʤi̯̯], the putative bases, are not contained within *remédiable* and [stɨnʤíst], the putative derivatives, and so the former do not correspond to cyclic subdomains of the latter. These data have been put forward as evidence for theories of the morphology-phonology interface dispensing with underlying representations and relying on output-output correspondence (Burzio 1996).

In this paper I argue that, in these phenomena, the putative bases do not control the phonological behaviour of the putative derivatives directly, but rather indirectly through their role in lexical acquisition. In English, dual-level suffixes like *-able* attach to inflectional stems in stress-neutral mode at the word level (e.g. *párody → párodi-able*) unless the presence of an appropriate alternation in the primary linguistic data (e.g. *rémedy ~ remédi-àte*) informs the learner of the availability of a root or derivational stem suitable for stem-level suffixation (e.g. *remedi- → remédi-able*): see Kiparsky (2005). Similarly, Romanian nouns exhibit a thematic element TH intervening between the root and the inflectional ending. TH is phonologically null in the singular, but realized overtly in the plural: e.g. /fok-Ø-u/ 'fire-**TH**-SG' ~ /fok-**ur**-i/ 'fire-**TH**-PL'. In certain stem classes, like the /ʌ/~/i/ class of STÂNGA 'left hand' (SG [stʲɨŋg-ʌ] ~ PL [stʲɨnʤ-i̯̯]), the exponent of TH in the plural is a floating piece of melody that triggers palatalization. This same TH allomorph is phonologically selected before suffixal front vowels in derivatives like [stɨnʤ-íst]. Thus, the plural form [stʲɨnʤ-i̯̯] affects the behaviour of [stɨnʤ-íst] only indirectly, by cueing the stem class to which the base STÂNGA belongs.

This approach to English dual-level affixation and to Romanian palatalization makes correct empirical predictions that are not available to theories relying on output-output correspondence. The analysis of *-able* as a dual-level affix correctly predicts that its stress-shifting uses (e.g. *rémedy ~ remédi-able*) follow the same pattern of primary stress assignment as items formed by adding *-able* to a bound root: e.g. *indómitable, indúbitable, inéxorable, irréfragable* (Kiparsky 2005). In turn, the analysis of Romanian palatalization as involving phonologically driven stem allomorph selection correctly predicts the contrast between palatalization and true word-level phonological generalizations like the diphthongization of /o/ to [o̯̯á] under stress. The latter applies transparently in denominal derivatives with no regard to the properties of the plural form of the base noun: e.g. [glo̯̯átʌ] 'mob.SG' ~ [glo̯̯áte] 'mob.PL' ~ [ɨnglotí], *[ɨnglo̯̯atí] 'to mob' (cf. Steriade 2008: 341).

Word prosody is lexical, post-lexical or just absent

Carlos Gussenhoven (Radboud University)

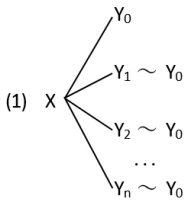
Besides vowels, consonants, quantity and syllabic structure, phonological representations of words may include stress and tone. Languages may have stress, tone, stress and tone and neither of these. An additional typological property of interest is the inclusion of stress or tone in lexical representations. This summary statement goes against a number of current positions. One of these is the assumption of stress in languages that fail to present any symptom of word stress or tone in empirical studies, like Indonesian. Another is the attribution of stress to languages with tone whose distribution is similar to that of stress, like Persian. A third is the more recent blurring of the distinction between lexical and postlexical prosody. Empirical data will be presented that illustrate these points.

The centrality of underlying representations: Evidence from reanalysis

Brent de Chene (Waseda University)

In this talk, I argue that the concept of underlying representation remains an indispensable element of phonological analysis and that UR choice remains a central analytic parameter. My strategy is to display a set of alternations that are analyzed with opposite underlying-derived polarity in different parts of the lexicon of a single language-a kind of analytic minimal pair for UR choice-and to argue that this example is representative of a larger set of cases with similar properties.

I begin with the question of how to interpret the set of alternations represented abstractly in (1).



In (1), X alternates depending on the individual lexical item with a range of Y_i (X and Y_i occurring in environments E and E′, respectively). In some items, X alternates unconditionally with Y_0; in others, it alternates instead with some other Y_i, but with the latter varying with and tending over time to be replaced by Y_0. The interpretation of (1) proposed is that X is underlying, Y_0 is derived by rule from X, and the remaining Y_i are lexicalized irregular forms that compete-in the end, unsuccessfully-with Y_0.

This "regularization" account of (1) is based on analytic decisions that can be characterized as follows. First, because the various Y_i contrast in E′ but are uniformly realized as X in E, the choice of X as underlying in (1) constitutes a **neutralizing choice of URs**, one that targets neutralized rather than contrastive values of alternating features or segments. Second, because the choice of X as underlying puts the alternations of X with the various Y_i in competition with each other for the role of regular alternation, the choice of Y_0 as derived by rule represents a **deneutralizing choice of regular alternation**.

The regularization account of (1) is not the only possible one, however. On the alternate "UR-reassignment" account, the various Y_i contrast in URs and are neutralized to X by rule in environment E. On this account, variation between Y0 and the remaining Y_i reflects relexicalization of Y_1, Y_2, etc. as Y_0. The central portion of the talk is devoted to a comparison of the regularization and UR-reassignment accounts of (1) as instantiated by ongoing changes in Korean noun inflection. Our conclusion will be that the regularization account is supported for that case, meaning that neutralized X is underlying for the alternations in question. For verbal inflection, on the other hand, the stability of the same set of alternations argues that the analysis of them that is in force involves no irregularity. This, in turn, is possible only if the contrastive alternants Y_i are underlying. With respect to the set of alternations in question, then, Korean nominal and verbal inflection constitute the suggested analytic minimal pair for UR choice.

In conclusion, I note theoretical implications of the two analytic decision-types underlying the regularization account of (1) and propose a database of reanalyses that instantiate those decision-types.

Ineffability as unavailable allomorphy

Andrew Nevins (UCL)

This paper examines the interaction between underlying representations, allomorphy, and phonological constraints in generating ineffability. The model is implemented in terms of realizational morphology, in which the assembly of inflected forms proceeds via computation with abstract morphosyntactic feature structures that are subsequently realized (or fail to be). Following ideas in B.W. Smith (2012) and Arregi & Nevins (2014), the proposal is that ineffability occurs when the phonological grammar blocks vocabulary insertion. Thus, ineffable inflected forms such as the would-be rhizotonic forms of Russian nouns such as *mechtá* 'dream' or Portuguese *abolir* 'abolish' result from the unavailability of rhizotonic allomorphs; similarly the impossibility of Turkish echo reduplication with *m*-initial nouns (e.g. *kitap-/m/itap*, **masa-/m/asa*) result from unavailable allomorphs, which continue to be impossible as enforced by constraints on URs for the morphemes in question. We present novel experimental evidence for ineffability in Portuguese rhizotonic forms mentioned above, and a typology of interactions between phonological pressures and constraints that inhibit the learner from postulating novel allomorphs (e.g. alternate URs).

Levels of representation and metarepresentation: An acquisitional perspective

Neil Smith (UCL)

My paper is relevant to the 'underlying' theme of the Workshop indirectly. I defend the claim that, in child phonology, there is only one level of lexical representation. That level is equivalent to the adult (phonological) surface form, implying that where the child's output differs from the adult input, that output is **not** represented. To account for the child's perceptible output while claiming that it is not represented, I argue that it is the product of a neural network. The implication is that there is no contrast between 'underlying' and 'superficial'.

I assume that at some stage in the use of the phonology for understanding and speaking there must be a transition from symbolic (strictly linguistic) activity to sub-symbolic (neural) activity - or vice versa. Sub-symbolic activity is not represented in the usual sense of that term: in particular, sub-symbolic sequences are not accessible to other phonological processes.

Evidence for the claim, taken from Smith 1973 and 2010, is both theoretical and empirical.

Theoretical evidence comes from the **parsimony** inherent in Minimalism or any other respectable theory: instantiated here by getting rid of one level of representation. Similarly, we have the possible **elimination** of the distinction between 'realisation' and 'phonetic detail' rules; the possibility of finessing the problem of **'unlearning'** the plethora of rules characteristic of the relation between adult and child forms; and the bonus of removing one argument for any pernicious **'dual lexicon'** hypothesis.

Empirical evidence for the hypothesis comes first from children's correct identification of different adult forms that they themselves produce as homophones. Second, the hypothesis explains asymmetric alternation, both synchronic and diachronic in the treatment of certain consonant clusters. Third, it provides the basis of an explanation for the variation in children's output which is conditioned by properties of the adult form even though children do not themselves pronounce that form.

There are also beneficial side-effects of the hypothesis: its incompatibility with Optimality Theory and 'Usage-based' phonology and hence, if correct, the apparent evidence against these theories. There are also possible advantages for learnability.

But problems are manifold. They include: the phenomenon of Recidivism, the putative existence of Templates/ Production schemata/ Idiosyncratic strategies; the potential incompatibility of the position with a featurally underspecified lexicon (FUL); but most seriously, any manifestation of **Metarepresentation** as seen in children's Metalinguistic abilities. These include: conscious awareness by children of the contrast between their and others' pronunciation; evidence that they are monitoring their own **Output** as seen in Repairs, Rehearsals, 'Explanations' and so on.

A possible escape from the potentially lethal implications of these examples involves appeal to a **Response Buffer**.

But even then serious problems remain. These include: **Scrambled eggs, I spy, Yellow lions, Sweet sugar, Foam and flowers**. I will wriggle, and appeal to the members of the workshop for inspiration.

Why bother with Underlying Representations? Part I: Syllables and moras

Bert Vaux (University of Cambridge)

One of the central ways in which the long-standing debate between rationalists and empiricists surfaces in linguistics involves the putative existence of abstract phonological representations underlying the seemingly more concrete surface forms which appear upon superficial reflection to be the basic units of language. On the one hand theoretical linguists ranging from Panini to Saussure, Sapir, Jakobson, Chomsky, and Halle have maintained the need for highly abstract mental representations, whereas linguists of a more empiricist bent (especially phoneticians and psycholinguists) such as Bybee, Flemming, and Hualde have argued for more surface-oriented views of phonology, a move facilitated by recent increases in the computational power of phonological theory and the rise of statistically-oriented and parallelist conceptions of language and cognition. In conceptual terms, this represents a return to pre-Saussurian thinking about linguistics, and brings theoretical linguistics in line with lay people's thinking about language. But is such a move empirically or conceptually warranted? The answer has significant implications not only for our broader philosophical conception of language and cognition, but also for phonological domains including privativity and underspecification, distinctive feature theory, morpheme structure constraints, and derivational vs declarative models of grammar.

In this presentation I explore the abstractness question in the domain of prosodic structure, focusing on evidence and argumentation involving first and second language acquisition, ludlings, language disorders, psycholinguistic experiments, speech errors, orthographic systems, and traditional "internal" considerations (alternations, cross-linguistic gaps in prosodic contrast), ultimately concluding that whereas the weight of the evidence with respect to phonological generalizations strongly supports the existence of abstract underlying phonological representations, in the realm of prosodic structure languages appear to employ a surprising degree of redundancy.

After reviewing the relevant literature on tip of the tongue effects, prosodically-conditioned allomorphy, and so on, I will concentrate on three case studies: Abkhaz moraification and stress, Armenian plural selection, and the problem of lexical prosody in Optimality Theory.

Workshop on morphological complexity

Organised by Peter Ackema (University of Edinburgh) & Rachel Nordlinger (University of Melbourne)

Morphological complexity, and linguistic complexity in general, has received significant attention in the literature over the last few years (e.g. Ackerman and Malouf 2013, Baerman, Brown and Corbett 2015, Dahl 2004, Dressler 2011, Kusters 2003, Miestamo, Sinnemäki and Karlsson 2008, Stump and Finkel 2013), yet the field is yet to reach a consensus on what contitutes morphological complexity, how it can be measured, and what implications it has for other parts of the linguistic system. For some researchers morphology, by its very existence, is complex (Carstairs-McCarthy 2010, Anderson 2015). For many, complexity is not a unitary pehnomenon but must be distinguished into different types and sub-types (e.g. relative vs absolute (Dahl 2004, Miestamo 2008, Kusters 2008)), but there is still no agreement on what these types and sub-types should be. It is clear that some languages have more complex morphological systems than others, but what is the nature of this complexity, what forms can it take, and how can we compare and contrast complexity across different languages?

In this workshop, we aim to address morphological complexity from a number of different perspectives – descriptive, typological and theoretical – addressing questions such as:

- what is (and what is not) morphological complexity?
- what are the limits of morphological complexity?
- how does such complexity interact with other parts of the linguistic system?
- what implications does such morphological complexity have for theoretical approaches to morphosyntax?

Characterized simply, inflectional morphology realizes the values of morphosyntactic features: we state a meaning or function (say, PLURAL) and associate it with some form or morphological operation (say, 'add *-s*') and that gives us English *bottles* and *frogs* and so on. But as is well known, in many languages there are additional factors which complicate this simple mapping. We address two aspects of that here: (1) ambiguities in the characterization of morphosyntactic feature values, and (2) the fact that morphosyntactic features represent not just a meaning or function to be realized, but also a condition on that realization.

We identify three types of ambiguity or uncertainty in the characterization of morphosyntactic feature values. (1) **Meaningless formations assume a meaning**. In the Western Huon (Trans New Guinea phylum) language Selepet, verbs fall into three different inflection classes on the basis of the form of the prefixes used for person-number of the object (McElhanon 1972). If we take inflection classes as representing morphologically conditioned allomorphy, then these formal distinctions are meaningless. But Selepet also has zero roots whose lexical distinction is carried by the inflection class contrast, e.g. *yek-Ø* 'see them', *yingi-Ø* 'bite/give them' (the two senses are distinguished in the suppletive 3SG object form), *yongo-Ø* 'hit them'. (2) **Meaningful formations lose meaning**. Number marking in Seri (an isolate of Mexico; Marlett 2009-11, Moser & Marlett 2010) may involve the agglutination of plurality from distinct sources. For example, with an inalienably possessed noun such as *janópx* 'her/his hand', plurality of both possessor and possessum may be marked by a sequence of two plural suffixes: *janópɬ-k* 'her/his hands', *janópaɬ-k-ox* 'their hands' (*-ox* also occurs independently as a simple plural suffix). But some unpossessed nouns form agglutinative plural forms without any apparent semantic effect; compare the simple plural *takɬ-k* '(kind of) dolphins' *sɬenápɲɬ-k-ox* '(kind of) herons' (3) **Formations have only approximate meaning.** In the West Nilotic language Nuer, a single suffix *-ni* typically marks the plural of nouns that lack a stem alternation for number, but only the oblique plural cases of nouns that do have an alternation (Baerman 2012). Thus the suffix clearly means something like PLURAL, but may or may not assume a case-marking function on top of that.

The second aspect of complexity we consder comes from languages which demonstrate the need for generalizations in the morphosyntactic dimension. Such generalizations are termed conditions on inflection; an example would be the animacy rule of Russian. These conditions have an interesting and surprisingly complete typology. The antecedent of the condition may involve (1) **semantic**, (2) **syntactic**, (3) **morphological** or (4) **phonological** information, and the consequent may involve (1) the **content paradigm**, (2) the **form paradigm** or (3) the **realization** (these three views of the paradigm are due to Stump 2012). Data demonstrating the twelve theoretical possibilities are drawn from a wide range of languages, with key examples from Slavonic and from Daghestanian languages. In the clearest instances (as with Russian animacy), these conditions are fully orthogonal to inflectional classes. The minimal requirements for inflectional morphology are lexical generalizations and orthogonal conditions on inflection. Languages which require

both types of generalization are, in this respect, more complex than those for which a single type of generalization is sufficient.

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Weight vs. weight, tone vs. tone: Affix blocking in featural affixation systems

Jochen Trommer (Leipzig University)

In many languages with rich segmental morphology, affixes with similar properties block each other (e.g. prefixes block prefixes, person affixes block person affixes) which has lead to descriptions in terms of templatic position classes (e.g. Bloomfield 1962) and the development of rule-block formalisms in Word-and-Paradigm approaches to inflection (Anderson 1992, Stump 2001). Which affix actually shows up in a given context (i.e. whether A blocks B or B blocks A) is often attributed to feature hierarchies such as the person scale 2 $\succ$ 1 $\succ$ 3 suggested for Algonquian (Macaulay 2009). Hyman (2013) observes that similar patterns can also be found with featural affixation, viz. tonal morphology. Thus he argues that different verbal categories in Leggbó which are expressed by characteristic tone sequences systematically exclude each other, a conflict which is resolved by the morphosyntactic hierarchy Irrealis $\succ$ Negative $\succ$ Habitual $\succ$ Other. Based on data from Western Nilotic languages, I address in this talk three basic questions such systems raise: (1) Is blocking triggered by competition in morphological position classes or by lack of phonological space? (2) does featural affix blocking interact with segmental affixation or work in parallel to segmental morphology (and to segmental blocking)? (3) How does Featural Affix Blocking (in the following shortly: FAB) relate to featural overwriting, the fact that featural affixes often overwrite corresponding phonological features on their morphological bases (Inkelas 1998, Trommer 2011). I demonstrate that in Nilotic (especially Jumjum and Mabaan, Andersen 1992, 2004), there are truly parallel systems, where person hierarchy effects in featural affixes are independent of similar effects in segmental affixes (question 2), and that similar parallel dissociations are also found between length-manipulating (moraic) featural affixation and tonal affixation in Dinka (Andersen 1995, Trommer 2015). Both facts provide evidence against a purely morphological account of FAB, where the blocking relations between different affixes should only reflect their morphological properties not their phonological substance. However FAB also proves to be problematic for the most prominent approach to featural affixation, Sign-based Construction Morphology (Inkelas 2014), which suggests to capture the phenomenon as essentially phonological, i.e. as overwriting to bases by affixal tone in specific constructions since arguably many tonal and quantitative blocking patterns in Dinka favor the realization of structurally inner morphological categories, not of outer categories as predicted by the sign-based account (question 3). Consequently, I argue that FAB at least in Western Nilotic is blocked either by purely phonological constraints (such as the lack of specific contour tones in the tone inventory of a given language) or specific constraints on morphophonological complexity (as the ban to associate a vowel to moras of more than two different morphemes proposed in Trommer 2015). Thus FAB seems to be essentially (morpho-)phonological which implies that the morphosyntactic hierarchies proposed by Hyman should be epiphenomenal and raises the question whether phonological factors also play a role in segmental affix blocking (question 1).

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The focus feature in Tundra Nenets morphology and syntax

Irina Nikolaeva (SOAS)

Tundra Nenets (TN) exhibits two types of bound morphemes: those that can be viewed as canonical affixes, and affixes with some clitic-like properties. The latter fall into several sub-classes, depending on their distribution. This paper focuses on the morphological and syntactic behaviour of the most interesting representative of this type, termed the 'Limitative'.

The basic phonological form of the Limitative is *-r'i-* and the basic semantics is 'only'. Its distribution is not limited to one grammatical class: the Limitative occurs on all major parts of speech. In the word form it precedes inflectional morphology, but its position differs with respect to suffixes that derive non-finite verbs, and in some instances it demonstrates variable placement. Thus, we find variants such as e.g. *to-qma-r'i-x°də-n'i* (come-NMLZ-LIM-ABL-1SG) and *to-qma-xə-r'i-də-n'i* (come-NMLZ-ABL1-LIM-ABL2-1SG) 'as soon as/only after I came', where in the first variant the limitative is placed in between the suffix *-qma-* that derives clausal nominalizations from verbs and the ablative case, while in the second variant it is found intramorphemecally.

I further show that the Limitative is an exponent of the focus feature [FOC], the focus being understood in the standard way as an operator that triggers a common ground update via invocation of alternatives. As is usually assumed, 'only' quantifies over alternatives generated by focus and therefore is focus-sensitive (Horn 1996; Krifka 1998; Krifka & Musan 2012). In TN [FOC] behaves in a rather complicated manner and appears to be a true morphosyntactic feature which is relevant for syntax.

When the whole (non-verbal) phrase is in focus, it serves as the domain/host for the Limitative. The [FOC] may be realised on the head, a dependent or both. For example, the meaning 'only in this forest' can be rendered in three different ways: as *t'uku° peda-r'i-x°na* (this forest-LIM-LOC), *t'uku°-r'i pedara-x°na* (this-LIM forest-LOC) or *t'uku°-r'i peda-r'i-x°na* (this-LIM forest-LIM-LOC). It may be justifiable to analyse the last example as agreement (concord), since here [FOC] shows up under exactly the same conditions as true attributive concord in TN. However, multiple representation of [FOC] in postpositional phrases does not suggest an agreement analysis.

When the scope of focus is only restricted to a subconstituent of a complex NP (a simple modifier, a complement, a possessor, or any element within a modifying relative clause), this element hosts the Limitative. It cannot be located on the head of the phrase; however, the feature [FOC] is still passed to the head, as can be seen from the patterns of object agreement.

(1)	[par'id'en'a-r'i	ti-m]	xada°/*xadaə-da
	black-LIM	reindeer- ACC	kill.3SG/kill-3SG>SG.OBJ
	'He only killed a BLACK reindeer [as opposed to a white one].'		

In TN focussed objects cannot trigger agreement on the verb, and we can see that in (1) the whole object NP counts as focused for the purpose of agreement, even though the scope of focus is limited to the modifier alone. The paper argues that some kind of percolation mechanism which targets [FOC] is required in the grammar of TN, and that this results in the creation of complex focus structures.

The flow and ebb of morphological complexity and what it might tell us

Marianne Mithun (UC Santa Barbara)

What exactly is morphological complexity, and what can we learn from efforts at define it? Dahl (2004, to appear) provides useful summaries of approaches to complexity, among them *relative* or *agent-related complexity*, pertaining to 'the amount of effort a generalized outsider has to make to become acquainted with it' and *absolute* or *objective* complexity, measured via information theory. Morphological complexity has been measured in various ways, among them Greenbergain morpheme-per-word ratios; numbers of slots within templates and morphemes in each; and mapping between content and expression. The Surrey Morphology Group defines it as 'the morphologically-conditioned deviation between inflectional forms and the inflectional features they realize.'

Trudgill (2011) has proposed that certain social factors can affect the growth and maintenance of morphological complexity. In small communities of intimates who share background knowledge and referents, the heightened frequency of particular patterns of expression can stimulate grammaticalization. But high degrees of synthesis and fusion can present challenges for untutored second-language learners, who are more likely to select analytic structures when available. Substantial proportions of such learners can have a simplifying effect. By contrast, early, competent bilinguals often replicate distinctions from one of their languages in the other, ultimately increasing complexity.

Here notions of morphological complexity and its evolution through time are examined in two languages with relatively elaborate morphologies: Central Pomo, of California, and Mohawk, of northeastern North America. Both are spoken in dynamic contact situations. Central Pomo developed over millennia in small communities characterized by exogamy and multilingualism. It shows specific morphological elaboration shared by neighboring but unrelated languages. Both languages now have successive generations of speakers affected to varying degrees by contact with English. Here their speech is contrasted in conversations involving multiple speakers with different histories, usually parents and their children or grandchildren, so that circumstances are comparable.

The speech of these generations is palpably different, but attempts to isolate the differences in terms of traditional parameters present useful challenges. Comparisons of morpheme/word ratios are surprisingly unrevealing. Counting morphemes actually demonstrates the crudeness of such an instrument: many strings of morphemes segmentable by a linguist are clearly not processed sequentially by speakers. Many derivationally-complex stems are opaque to them, as are certain inflectional endings, originally formed by successive additions of suffixes. Segmentability is neither diachronically nor synchronically categorical: morpheme boundaries fade gradually over time, and at any moment, individual boundaries vary in strength. Allomorphy mistakes are non-existent, apart from a very few among adult learners. The primary difference among generations appears to be inventories of lexicalized chunks: stems, words, and phrases. Differences surface especially in the use of alternatives for packaging information through discourse, such as defocusing and sophisticated clause-combining suffixes in Central Pomo, and noun incorporation and various adverbial affixes in Mohawk. Morphological complexity for the linguist and for the speaker are clearly quite different things.

Dahl, Östen 2004. *The Growth and Maintenance of Linguistic Complexity*. Benjamins.
To appear. Polysynthesis and complexity. *The Oxford Handbook of Polysynthesis*. Nicholas Evans, Michael Fortescue, and Marianne Mithun, eds. Oxford.
Trudgill, Peter 2011. *Sociolinguistic typology.* Oxford.

Themed session - Movement out of ditransitives

Convened by Anders Holmberg (Newcastle University) & Michelle Sheehan (Anglia Ruskin University)

There is cross-linguistic variation regarding how the two objects of ditransitives can move, by A-movement and A-bar movement; this is a well known fact that has been subject to investigation and theorizing at least since the 1970ies (Jackendoff & Culicover 1971, Baker 1988, Bresnan & Moshi 1990, Woolford 1993, Holmberg & Platzack 1995, Ura 1996, McGinnis 1998, 2001, Anagnostopoulou 2003, Miyagawa & Tsujioka 2004, Kupula 2011, Haddican & Holmberg 2012, 2015). For example, in a common variety of English in the double object construction (DOC), wh-movement of the Recipient is degraded but wh- movement of the Theme is fully acceptable, while A-movement of the Recipient is fine but A- movement of the Theme is ungrammatical.

(1) a. What did you give John?
    b. ??Who did you give a book?

(2) a. *The book was given John.
    b. John was given a book.

different varieties of English there is substantial variation regarding (1)-(2). It is not unexpected that movement out of ditransitives should be restricted. Standard generative theory actually predicts that there will be intervention effects or other locality-related factors restricting such movement. The task is to determine: (i) what exactly the factors are; (ii) why they seem to affect A-movement and A-bar movement differently; and (iii) why attested asymmetries vary from language to language and even within languages, depending on construction type (DOC vs. prepositional dative). It is interesting, in this regard, that there are also languages which appear to have perfectly symmetrical DOCs, like Norwegian: wh- movement of either object is fine, and A-movement of either object is fine as well. Bantu languages, too, display varying degrees of symmetry and asymmetry in ditransitive and applicative constructions.

A crucial question in this debate is how and why the prepositional dative differs from the DOC and what this implies for the difference between the two constructions. If the two constructions involve different base generated structures and distinct thematic roles, then what does this imply for languages such as Italian, which appear to lack the alternation? Languages such as Spanish seem to have the alternation (Demonte 1995, Cuervo 2003 on Spanish), but general is this? In this regard, it is also interesting that in Theme passives with non-agentive by-phrases, a restriction on wh-movement of the Recipient surfaces in Italian, as Holmberg, Sheehan & Van der Wal discuss in their contribution, suggesting that Italian too might have the alternation.

Movement from the double object construction is never symmetrical

Anders Holmberg (Newcastle University), Michelle Sheehan (Anglia Ruskin University) & Jenneke van der Wal (University of Cambridge)

Norwegian is a language with symmetrical double object constructions (DOCs) because it permits both Th(eme) and R(ecipient) passives. Nonetheless an intriguing asymmetry emerges in Th passives: A-bar extraction of the R becomes ungrammatical, whereas A-bar extraction of the Th in an R passive is fully grammatical:

(1) Hvilken bok ble mannen gitt?
which book was the.man given

(2) *Hvilken mann ble boken gitt?
which man was the.book given

Note that no such asymmetry is observed in prepositional datives, and unlike in Standard British English, there is no general ban on A-bar extraction of R (3). This suggests that in (2) A-movement blocks A-bar movement, or vice versa.

(3) Hvem ga du boken?
Who gave you the.book 'Who did you give the book to?'

Initial research suggests that the same, or a similar, effect arises in other languages. In Zulu, a language with symmetrical DOCs, R cannot be object-marked on the verb or relativized in Th passives (Adams 2010). Even in Italian, a language which superficially seems to lack the DOC, we find the same asymmetry:

(4) *A chi saranno date alcune idee da questo libro?
To who be.FUT.3PL given.FPL some ideas by this book

A-bar extraction of R is impossible from a Th passive with a non-agentive by-phrase. This non-agentivity is evidence for a true DOC (which does not need an agentive subject), rather than a prepositional dative (which does, Oehrle 1976). Italian is thus shown to have both constructions (cf. Cuervo 2003 on Spanish), but it only shows the asymmetry in the DOC.

Following Marantz (1993) and Pylkkänen (2008), we assume that R in the DOC is introduced by the applicative head (Appl). Unlike Pylkkänen, however, we assume that Appl selects VP.

(5) $[_{\text{ApplP}}$ R Appl $[_{\text{VP}}$ V Th]]

To account for the ungrammaticality of (2) and (4), we propose the following analysis. A passive vP is non-phasal, making the object accessible to T. In DOCs, however, ApplP is present and ApplP is a phase, implying that all movement from it must proceed through its edge. This is why passives of DOCs are a unique context where A-movement must proceed through a phase edge. In R-passives, this need to move through the phase edge is trivially satisfied as R originates there. In Th passives, however, Th must raise to specApplP and it is this movement which traps R inside the phase, assuming a 'single escape hatch' (see Aldridge 2004, 2008, Coon et al. 2014 for similar proposals for syntactic ergativity):

(6) $[_{\text{ApplP}}$ Th R Appl $[_{\text{VP}}$ V Th]]

Why isn't A-bar extraction of Th blocked in R passives? This we attribute to the remaining fundamental difference between A and A-bar movement. A-movement involves Agree. Whereas it is possible to Agree with (and hence A-move) anything in a specifier of the phase edge, we propose that only the outermost edge is accessible for A-bar movement.

◆ Aldridge, E. 2004. Ergativity and word order in Austronesian languages. PhD, Cornell University. ◆ Aldridge, E. 2008. Phase-Based Account of Extraction in Indonesian. *Lingua* 118: 1440-1469. ◆ Coon, J., P. M. Pedro & O. Preminger. 2014. The role of case in A-bar extraction asymmetries: evidence from Mayan. *Linguistic Variation* 14 (2), 179-242. ◆ Marantz, A. 1993. Implications of asymmetries in double object constructions. In Mchombo, S. (ed.), Theoretical aspects of Bantu grammar, 113-150. Stanford, CA: CSLI. ◆ Oehrle, R. T. 1976. The grammatical status of the English dative alternation. Ph.D. dissertation. MIT. ◆ Pylkkänen, L. 2008. Introducing arguments. Cambridge, MA: MIT Press.

Thematically conditioned asymmetries: Maragoli vs. Greek

Dimitris Michelioudakis (University of York) & Nikos Angelopoulos (UCLA)

Maragoli (Bantu) presents us with an interesting asymmetry in the syntax of double object constructions which emerges when cliticisation/object marking interacts with and feeds (though only partially and asymmetrically) passivisation. In Maragoli, there are two ditransitive frames: (a) one in which the verb carries no applicative morpheme and goals are prepositional while beneficiaries are non-prepositional DPs; (b) one in which the verb bears an applicative affix and both direct (DO) and indirect (IO) objects (whether goals or beneficiaries) are non-prepositional DPs. Interestingly, the non-applicative frame for beneficiaries is perfectly symmetrical, i.e. both the DO DP and the Benef DP can be passivized, preceding and agreeing with the verb. The applicative frame, on the other hand, is asymmetric in two respects: (a) goal and benefactive DPs can be passivized with the direct object being realized as full/lexical DP (1), while (b) theme passivisation is only possible in the presence of cliticised IOs, though Benefs only, not goals (2a-b).

(1) mu-ana a-gul-er-u-e mu-kari
1-child 3SG-buy-APPL-PASS-TNS 1-woman 'a child$_{BEN.}$ was bought a woman'

(2) a. mu-ana a-mu-gul-er-u-e
1-child 3SG-OM-buy-APPL-PASS-TNS 'a child$_{THEME}$ was bought for him'

b. *mu-ana a-va-tum-ir-u-i
1-child 3SG-OM-sent-APPL-PASS-TNS 'a child$_{THEME}$ was sent to them'

Cliticisation/Obj marking itself is asymmetric in that, in the applicative frame, only indirect objects (both goals and beneficiaries) may cliticise, not themes. Cliticisation of themes is only possible in non-applicative ditransitive constructions and in simple transitive constructions. Obviation of intervention effects in cases of A-movement across intervening (dative) arguments is certainly not unheard of. For instance, Greek also allows theme passives only if IO is cliticised or clitic-doubled (Anagnostopoulou 2003). Cliticisation of the indirect objects results in having the head of the chain of the indirect object in T, thus canceling its defective intervention in T-Agree.

However, Greek exhibits an asymmetry between goals and Benefs which is the reverse of what we see in Maragoli: theme passives over Benefs are ungrammatical (Michelioudakis 2012). We propose that in fact this difference reduces to the different nature of passives in the two languages. We adopt Collins's (2005) 'smuggling' analysis of passives in a range of languages, whereby the complement of the complement of Voice^0 is moved to Spec-Voice, circumventing the intervention of the external argument in Spec-v*P between T and the passivized argument. So we argue that in Maragoli (and arguably beyond, e.g. in English) the goal DP in Spec-ApplP is always part of the smuggled constituent (assuming VoiceP>v*P>ApplP>VP to be the spine of the lower phase), thus blocking Agree between T and the theme. The IO clitic is attracted by the lower phase head, i.e. lower than the smuggled constituent, prior to v/Voice-to-T movement. In Greek passives, on the other hand, there is evidence that, despite the existentially bound reading, external arguments are not syntactically present (i.e. no control/binding by implicit agents is possible); we take this to suggest that there is no lower phase head, so that the indirect object clitic is directly attracted by T. As for Benefs, non-selected datives tend to be interpreted as involuntary causers in all intransitive contexts in Greek, therefore the ban is due to independent reasons. We also argue that Benefs are in fact first merged low as VP-adjuncts, an assumption supported by the non-applicative frame, prior to moving to an ApplP higher than VoiceP (as suggested by scope effects between non-recipient Benefs and agents); thus in the non-Appl frame in Maragoli both themes and Benefs are in the edge of the same VP, thus equidistant from T, while in the Appl frame, clitic movement from Spec-ApplP targets T directly, canceling defective intervention as above.

Baker et al. (2012:54) note that 'For more than thirty years, symmetrical and asymmetrical object constructions have been a classic topic in the syntax of Bantu languages and beyond'. Languages are symmetrical if both objects in a ditransitive verb behave alike in tests like passivisation and pronominalisation. In Zulu, either object can be object-marked on the verb:

(1) a. U-mama u-**ba**-nik-e in-cwadi aba-ntwana. [Zulu]
1a-mama 1SM-2OM-give-PFV 9-book 2-children

b. U-mama u-**yi**-nik-e aba-ntwana in-cwadi.
1a-mama 1SM-2OM-give-PFV 2-children 9-book
'Mama gave the children a book.' (Adams 2010: 11)

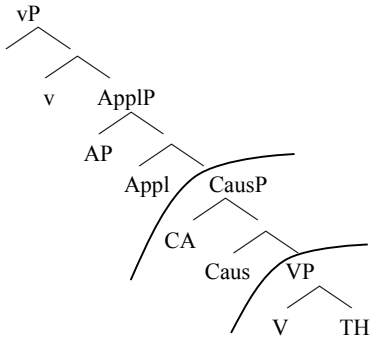
Using these and other tests, languages have been divided into two classes: symmetrical or asymmetrical (Bresnan & Moshi 1990). However, it is becoming clear that the situation is not that black-and-white, with 'symmetrical languages' showing asymmetry in some part of the language (Rugemalira 1991, Schadeberg 1995, Baker et al. 2012, a.o.).

In this talk I present new data on double object constructions in Bantu languages, from which a **hitherto unnoticed typological pattern** emerges: A) causative, applicative and lexical ditransitive ('give') double object constructions can differ with respect to symmetry, B) they are in an implicational relationship as in (2): if a language is symmetrical for one type of predicate, it is symmetrical for the predicate types to its right as well:

(2) causative > applicative > lexical ditransitive

Apart from the interesting **empirical predictions** this generalisation makes, it also raises **theoretical issues**. First, the appearance of asymmetries in 'symmetrical languages' motivates a non-base generated analysis of symmetry (Anagnostopoulou 2003, Pylkkänen 2008). Second, it informs us about the vP domain. Specifically, I argue that the variation can be analysed as differences in phase heads in the vP (cf. McGinnis 2001). When v probes for object marking, which goals are accessible depends on **whether Appl and/or Caus are phases**: if they are, the respective complements become impenetrable (Chomsky's 2000 PIC) and objects inside the complement are inaccessible for object marking, causing asymmetry.

	CAUS	APPL	DITR	type
Zulu	✓	✓	✓	1
Lubukusu	✓	✓	✓	
Tharaka	✓	✓	✓	
Shona	✓	✓	✓	
Herero	✗	✓	✓	2
Sotho	✗	✓	✓	
Luguru	✗	✗	✓	3
Swahili etc.	✗	✗	✗	4



Neither Caus nor Appl is a phase in type 1 (hence the theme is accessible: full symmetry); only Caus is a phase in type 2 (hence the theme is inaccessible in causatives, which are thus asymmetric); both Caus and Appl are phases in type 3 (hence the theme is inaccessible in both). Since Caus and Appl are absent in lexical ditransitives, the theme is accessible here in all three types. Since the probe includes a topic feature, it will Agree with whichever object is topical: when both objects are, asymmetry reappears as expected (Zeller 2015).

In the talk, I will provide **cross-Bantu evidence** for the implicational hierarchy and further discuss the implication that phasehood is consecutive (if ApplP is a phase, then CausP is a phase) and object marking in type 4 asymmetric languages as not featurally restricted.

Movement through the edge of vP in double object passives in Swedish

Bjorn Lundquist (University of Tromsø)

In this talk I offer an account of some observations originally made in Lundquist (2004) concerning restrictions on A-bar movement in Swedish passive double object constructions. In Swedish, either the underlying direct object (DO) or indirect object (IO) can be promoted to subject in double object passives (1-a). However, all types of A-bar movement (WH-/focus, Topic or movement of relative operator) of the indirect object are prohibited once the DO has been promoted to subject (1-b), while no such restrictions hold for the DO when the IO has been promoted (1-c) (exemplified below with relative clauses):

(1) a. Jobbet har erbjudits Johan./Johan har erbjudits jobbet.
job.DEF has offer.PAST.PASS Johan/Johan has offer.PAST.PASS jobb.DEF
'Johan has been offered the job.'

b. *Mannen som jobbet har erbjudits har tackat nej.
man.DEF REL. job.DEF has offer.PAST.PASS has thanked no
'The man that has been offered the job has declined.'

c. Jobbet som mannen har erbjudits är inte särskilt välbetalt.
job.DEF REL. man.DEF has offer.PAST.PASS is not particularly well-payed
'That job that the man has been offered is not very well-payed.'

Notice that the impossibility of A-bar movement in these cases cannot have its sole source in the licensing of the indirect object, since A-bar movement of IO is unproblematic in the active voice (2-a). Neither can it have its source in the passive voice, since a A-bar movement GOAL from a PP is licit in passives (2-b):

(2) a. Mannen som vi har erbjudit jobbet har tackat nej.
'The man that we have offered the job has declined.'

b. Mannen som jobbet har erbjudits till har tackat nej.
'The man that the job has been offered to has declined.'

The proposed analysis derives the asymmetry in A-bar movement restrictions from the interaction between passivization and the configuration of the arguments in the double object construction. The IO is the "default" subject choice in passive DOC, which follows from the fact that it is generated closer to T than DO is (Attract closest, Chomsky 1995). The DO can only be promoted if it first undergoes a short movement to a topic/focus position at the edge of the vP, triggered by focus/topic features. From that position it will be closer or equally close to T as IO, and can therefore be promoted to subject. A-bar movement from within the vP always has to go via the edge of vP (see e.g. Chomsky 1993, Legate 2003 and Rackowski and Richards 2005), and I will crucially assume that in Swedish, there is only one such position at the vP edge. Once the DO has moved through that position, all other A-bar movement is blocked. When the GOAL is realized as a PP on the other hand, the direct object is located closer to T than the goal, and the DO therefore does not need to go through the topic/focus position at the vP edge. Subsequent WH-movement of the GOAL in the PP is thus straightforwardly explained (2-b). This analysis makes two predictions: (1) DO-passives should only be licit when the DO carries some sort of focus/topic feature, and (2) A-bar movement of *any* vP-internal material should be illicit in the DO passive. I will present data from Lundquist (2004) that support the first prediction. The second prediction seems to be correct too, as seen in the following contrast:

(3) Mannen som Johan erbjöds jobbet av.../*Mannen som jobbet erbjöds Johan av...
man.DEF REL. Johan offer.PAST.PASS job.DEF by.../man.DEF REL. job.DEF offer.PAST.PASS Johan av...

Two constraints on theme passivisation in Swedish

Bill Haddican (CUNY)

A central issue in work on locality in A-movement has been the passive symmetry puzzle —the problem of modeling cross-linguistic variability in the availability of theme passivisation out of double object constructions. Recently Citko (2008) and Haddican and Holmberg (2012, 2014) have argued for contemporary variants of the classic case-based approach to passive symmetry (see Roberts 1987, Baker 1988). On Haddican and Holmberg's approach to theme passives in Norwegian and British English dialects, what makes possible theme-passivisation in relevant dialects is the vP-external placement of the "extra" source of case for the applied argument, i.e. a linker head (Baker & Collins 2006). This head probes the goal and, in passive contexts, where v assigns no case, the theme argument raises to T for case, as in (1). Haddican and Holmberg, however, provide no phonetic evidence for such a head in the dialects they consider.

(1) $[_{\text{TP}}$ Theme $[_{\text{vP}}$ v $[_{\text{LkP}}$ Lk $[_{\text{ApplP}}$ Goal ~~Theme~~]]]

This paper argues that evidence to this effect comes from Swedish. Holmberg and Platzack (1995) note in a brief discussion that theme passives in Swedish root clause contexts are generally bad with monomorphemic ditransitive verbs, but better with a class of bimorphemic verbs including a preposition, as in (2) and (3).

(2) Pris-et gav-s pojk-en.
Prize-DEF gave-PASS boy-DEF.
'The prize was given the boy.'

(3) Pris-et **till**-della-s pojk-en.
Prize-DEF to-share-PASS boy-DEF.
'The prize was awarded the boy.'

We test this claim in a controlled judgment experiment with 101 native speakers of Swedish. Results revealed an interaction between passivization (goal vs. theme) and verb class (monomorphemic vs. bimorphemic), with bi-morphemic verbs favoring theme passives. We take the the prefixal P-elements in sentences like (3) to be Lk heads that incorporate into the verb. The results therefore suggest that theme-passivisation is possible in Swedish root contexts just in contexts where an alternative source of case is present.

A second effect on theme passivization in Swedish is A-bar movement. Holmberg and Platzack (1995) note that theme passivization with monomorphemic verbs is facilitated in relative clauses like (4). Results from the above experiment reveal an interaction between passivization (goal vs. theme) and context (root vs. relative clause), supporting the effect suggested by Holmberg and Platzack.

(4) Pris-et som gav-s pojk-en.
Prize-DEF that gave-PASS boy-DEF.
'The prize that was given the boy.'

(5) $[_{\text{CP}}$ Op ... $[_{\text{vP}}$ ~~Op~~ v $[_{\text{ApplP}}$ Goal Op]]]

The contrast between relative and non-relative contexts suggests that A-bar movement is crucial to the availability of theme-passivization. We propose that in non-relative ditransitive passives, v probes the theme and its EPP feature will attract the theme if and only if the goal argument is assigned case by the linker morpheme. In the object relative case, theme movement is not triggered by the EPP feature on v. Rather, the theme moves to the edge of vP because it is a silent operator. From this position, it can later raise to CP. Something more, though, needs to be said to account for case on the goal in sentences like (4). If, as we have proposed, applicative constructions with *give*-class verbs do not have a linker in Swedish, then some other source of case on the goal argument is needed. We suggest that the fact that v is not involved in licensing of the theme enables it to probe the goal upwards, via cyclic agree (Bejar & Rezac 2009).

On the structure of sluicing: Insights from Bulgarian P-stranding

Klaus Abels (UCL)

The behavior of preposition stranding under sluicing in Bulgarian offers new reasons for the assumptions that (i) the ellipsis site is syntactically represented and (ii) the elided structure is semantically rather than syntactically isomorphic to the antecedent.

Pronominal case: Bulgarian shows no case morphology on nouns. Case on pronouns, including wh-pronouns, is residual: in subject position only the historical nominative is allowed; in object position and as the complement of a preposition both the nominative and the historical accusative are possible. For sluicing, the form of the indefinite in the antecedent and that of the wh-pronoun in the sluice may mismatch in both directions when the wh-pronoun acts as a prepositional complement, (1), or as an object. In subject sluices only the nominative form is allowed.

P-stranding under sluicing interacts with case: Under overt wh-movement, Bulgarian disallows preposition stranding with both pronominal forms. Merchant (2001) reports that preposition stranding is ungrammatical also under sluicing. My informants confirm this for the accusative form of the wh-pronoun, (1), but accept preposition stranding under sluicing with the nominative form of the wh-pronoun, (1).

(1) Ivan tancuva s {njakoi | njakogo}, no ne znam {(s) koi | *(s) kogo}.
Ivan danced with someone.NOM someone.ACC but NEG know with who.NOM with who.ACC
Ivan danced with someone but I don't know who.

This pattern is expected if there is syntactic structure at the ellipsis site licensed under semantic rather than syntactic isomorphism (Merchant, 2001; AnderBois, 2011; Barros, 2014; Barros et al, 2014,). Under this type of account, the pre-sluice for the version with the preposition is syntactically and hence semantically isomorphic (up to wh-movement) with the antecedent. The pre-sluice for the prepositionless version is the copulative structure, (2), which crucially disallows the accusative form of the wh-pronoun. This pre-sluice is semantically but not syntactically isomorphic to the antecedent.

(2) …no ne znam {koi | *kogo} beshe tova.
…but NEG know who.NOM who.ACC was that
…but I don't know who that was.

P-stranding under sluicing interacts with sluicing type: The role of the copular structure in licensing the prepositionless, nominative version of (1) is confirmed by the impossibility of apparent preposition stranding with multiple sluicing, (3), and contrast sluicing, (4). Both lack a well-formed copular pre-sluice.

(3) Ivan zapozna njakoi s njakoi, no ne znam koi *(s) koi.
Ivan introduced someone with someone but no know who.NOM with who.NOM
Ivan introduced someone to someone, but I don't know who to who.

(4) Ivan tancuva s Maria, no ne znam *(s) {koi | kogo} oshte.
Ivan danced with Maria but NEG know with who.NOM who.ACC else
Ivan danced with Maria, but I don't know with who else.

The generalization emerges that apparent preposition stranding under sluicing is acceptable just in case a copular pre-sluice, compatible only with the nominative form of the wh-pronoun, is available. This generalization remains mysterious if either there is no syntactic structure at the ellipsis site or if the syntactic structure at the ellipsis site is necessarily syntactically isomorphic to the antecedent.

The phonology of Ludling in Malay: A constraint-based analysis

Zaharani Ahmad (Dewan Bahasa dan Pustaka)

This paper attempts to account for the phonology of ludling in Malay which involved some types of reversal movement between syllable onsets of the base word (i.e. /batu/ → /tabu/ 'stone' and /bəlakaŋ/ → /ləbakaŋ/ 'back'). The analysis proposed in this study is couched in the constraint-based approach of correspondence theory (McCarthy and Prince 1995), particularly the correspondence between the base and the game form which is referred to as BASEARG (Base Argot) (Ito, Kitagawa and Mester 1996). Onset swapping language game involved a violation of correspondence constraints of LINEARITY and CONTIGUITY which are dominated constraints in the hierarchy. These constraints are outranked by a dominant constraint which triggers onset swapping to take place that is L(EFT)-ANCHOR-C: The left segment of the first syllable in the argot representation corresponds to the left segment of the second syllable of the base representation. The present analysis manages to bring together various patterns including those appear to be irregular in the surface under a unified set of constraints. The formal account relies on the basic tenet of Optimality Theory that is the optimal output is the output candidate that best satisfying the language's constraint hierarchy. The different outcomes for monosyllabic words (i.e. /ju/ → /juʔu/ 'shark' and /pon/ → /poʔon/ 'also') and V-initial polysyllabic words (i.e. /itu/ → /tiʔu/ 'that' and /utara/ → /tuʔara/ 'north'; /aŋkat/ → /kaŋat/ 'lift' and /aŋkə/ → /kaŋə/ 'number') as compared to C-initial polysyllabic words are explained via the notion of Emergence of the Unmarked (McCarthy and Prince 1994). The relevant constraints at play here are ONSET and MIN-WORD.

Quality and quantity readings with proportional modifiers

Laura Aldridge and Ad Neeleman (UCL)

Proportional modifiers, such as *half*, appear in a number of environments (Bochnak 2010):

(1) a. The cake is half baked
b. John ate half (of) the cake

In (a), *half* modifies a gradable adjective and has a 'quality' reading, expressing that the cake is halfway to being fully-baked; (b) exemplifies the partitive, or 'quantity' use of *half*, in which half of the cake is eaten. Analyses of these uses abound in the literature, but there is a distinct use of proportional modifiers which has thus far received no formal analysis:

(2) The meal is half cooked

(2) has a reading similar to that in (1a), in which the whole meal is halfway along a 'cooked-ness' scale. It also has a quantity reading, expressing that half of the meal is (fully) cooked. Unlike the partitive case in (1b), however, *half* here does not directly modify the noun phrase, but the adjective. Providing a compositional semantics for this case is therefore not trivial.

Kennedy & McNally (2009), focusing on the same contrast found with colours, propose that colour expressions are lexically ambiguous between a quality and quantity reading:

(3) a. The jacket is very green$_{(QUALITY)}$ (= the jacket is a bright shade of green)
b. The jacket is half green$_{(QUANTITY)}$ (= half of the jacket is green)

Rather than adopting and extending this analysis, which would require positing a systematic lexical ambiguity, we propose that the ambiguity in (2), and contrast in (3), involves distinct syntactic structures. Specifically, we argue that the quantity reading arises via a null operator 'μ' situated between the modifier and gradable predicate (which has itself introduced a degree argument valued by a degree modifier such as *pos* (Kennedy 1999)). μ opens up the part-structure of the nominal subject, asserts that a part of the nominal satisfies the predicate, and introduces a degree argument quantifying over the size of this part in relation to the whole. The result is an expression of the correct type to be input to further degree modification:

(4) [[μ *pos*-green]] = [λd.λx ∃y. y ≤ x & *pos*-green(y) & quantity(y/x) = d]

This analysis makes a number of welcome predictions: firstly, that degree modifiers can co-occur and receive distinct quality/quantity readings, which is predicted to be impossible on a lexical ambiguity account:

(5) a. The meal is 20% [μ *pos*-cooked] (=20% of the meal is cooked the 'standard' amount)
b. The steak is partly [μ half-cooked] (=part of the steak is half-cooked)

Secondly, various non-adjectival categories (many of which, on standard assumptions, do not introduce a degree argument at all) should also be able to receive this quantity reading, provided the category is of a suitable type to be input to 'μ' (i.e. type <e,t>):

(6) a. Tim is half μ [$_{PP}$ under the bed]
b. The best jam is half μ [$_{NP}$ sugar] (and half μ [$_{NP}$ fruit])

Interestingly, while VPs may appear to have a quantity reading with *half*, they do not allow the reading with any other proportional modifier, suggesting that they are not (in general) suitable candidates for μ modification; this will be accounted for under independent assumptions regarding the structural differences between VPs and other categories:

(6) # The students are a third μ [$_{VP}$ laughing] (and two thirds μ [$_{VP}$ crying])

Finally, assuming that synthetic comparatives require adjacency between comparative morpheme and adjective (Embick 2007), only analytic comparatives should allow a quantity reading:

(7) a. The carpet is more [μ red than μ blue]
b. * The carpet is redder than blue

To conclude, a structural account of the quality/quantity ambiguity is preferable, on both theoretical and empirical grounds, to a lexical ambiguity account of gradable predicates.

Possessive passive in Japanese: New evidence for possessor-raising

Seiki Ayano (Mie University)

The principal goal of this paper is to show that syntactic possessor-raising is involved in possessive passive in Japanese. (1) is a typical possessive passive construction in Japanese, in which the possessor and the possessee are nominative and accusative, respectively. Notice that *zibun* "self" in *zibun-no heya-de* "in self's room" can refer only to the possessor *Taroo*.

(1) Taroo-ga$_i$ Hanako$_j$-ni (zibun$_{i/*j}$-no heya-de) asi-o hum-are-ta. [possessive]
Taroo-NOM Hanako-NI self-GEN room-LOC foot-ACC stamp-PASS-PAST
"Taro was stamped on the foot by Hanako (in his/*her room)."

On the surface, the possessive passive in (1) looks like the indirect passive in (2a), in that the accusative Obj is present. However, regarding anaphoric reference, possessive passive and indirect passive behave differently; in (2a), either the subject or the agent can be the antecedent of *zibun*. In (2b), the direct passive subject is the only antecedent of *zibun* "self."

(2) a. Taroo-ga$_i$ Hanako$_j$-ni (zibun$_{i/j}$-no heya-de) doramu-o tatak-are-ta. [indirect]
Taroo-NOM Hanako-NI self-GEN room-LOC drum-ACC beat-PASS-PAST
"The drum was beaten (in his/her room) room by Hanako on Taroo."

b. Doramu-ga$_i$ Hanako$_j$-ni (zibun$_{i/*j}$-no heya-de) tatak-are-ta. [direct]
drum-NOM Hanako-NI self-GEN room-LOC beat-PASS-PAST
"The drum was beaten by Hanako in his/*her room."

Based on the anaphor facts, possessive passive is considered mono-clausal on a par with direct passive, while indirect passive is bi-clausal. Also, the nominative subject in the possessive passive and that in the direct passive are considered to have raised from within VP, while the indirect passive nominative subject is base-generated in the matrix clause.

This paper provides further evidence for the above analysis, drawing on Kishimoto's (2012) work on honorification in Japanese. (3) illustrates two honorific constructions in Japanese. In (3a), the verb is affixed by the honorific prefix *o-* and suffixed by the light verb *-naru*. In (3b), the aspectual verb "be" is turned into the honorific construction.

(3) Tanaka-sensee-ga tyuusyoku-o (a) o-tabe-ni-nat-teiru. / (b) tabete-o-ide-ni-naru.
Tanaka-teacher-NOM lunch-ACC HON-eat-LV-ASP eat-HON-be-LV
"Prof. Tanaka is eating lunch."

In contrast to Harada (1976) and Shibatani (1978), Kishimoto (2012) argues that targets for honorification include sentential elements associated with [Spec, *v*] in (3a) and those associated with [Spec, ASP] in (3b). Under this analysis, the subject of direct passive is naturally the target for the two types of honorific construction since the Theme subject moves through [Spec, *v*$_{\text{PASS}}$] and [Spec, ASP] (Kishimoto 2012), as illustrated in (4):

(4) Ito-sensee-ga gakucyoo-ni o-home-ni-nar-are-teiru / home-rarete-o-ide-ni-naru.
Ito-teacher-NOM president-NI HON-praise-PASS-LV-ASP / praise-PASS-HON-be-LV
"Prof. Ito is being praised by the university president."

It follows from the possessor-raising analysis of possessive passive and Kishimoto's (2012) honorification analysis that the nominative possessor should behave like the subject in direct passive, since the possessor is considered to move through [Spec, *v*$_{\text{PASS}}$] and [Spec, ASP]. The prediction is borne out, as the grammaticality of the two sentences in (5) shows:

(5) Ito-sensee-ga tanka-de ICU-ni musuko-o o-hakob-are-ni-nat-teiru / hakob-
Ito-teacher-NOM stretcher-with ICU-to son-ACC HON-carry-PASS-LV-ASP carry
arete-o-ide-ni-naru
PASS-HON-be-LV Lit. "Prof. Ito is being carried his son into the ICU on a stretcher."

The present paper will also show that indirect passive behaves differently from possessive passive and direct passive with respect to the two types of honorific construction: the nominative Experiencer subject in indirect passive is the target for honorification only in the aspectual honorific construction, which further supports the possessor-raising analysis.

Effects of L2 knowledge into L1 speech perception: Boundary movement in the vowel perceptual space

Fernanda Barrientos (University of Manchester)

Despite the large amount of evidence of L1-to-L2 effects in speech perception and the corresponding phonological models that explain such effects (Best, 1995; Flege, 1995; Escudero, 2005), there is few evidence regarding the effects of L2 learning in L1 perception. This study attempts to find evidence of boundary movements across the perceptual vowel space of L1 categories in cases where the L2 has more vowels than the L1. The goal is to find whether more experience in English would affect perception of vowels when the listener is asked to categorize an English-like vowel within a Spanish-like phonological context, thus priming them to activate L1-like speech perceptual strategies.

A forced-choice categorization test was carried out through an online survey service. Subjects were 42 adult native speakers of Spanish with different levels of proficiency in English. They categorized 40 CVC nonce words, where C_C was a valid onset-coda combination in Spanish and the vowel was a token of an English monophthong that a) is located on the boundary of 2 or more Spanish vowel categories, and b) is not present in Spanish ([ɪ-ɛ-ʊ-ʌ-æ-ɑ]). The stimuli were recorded in a soundproof environment by a bilingual speaker, and the vowels were judged by a native speaker of English when recorded. The category choices were all of the 5 vowel categories present in Spanish (/i-e-a-o-u/).

The results showed different boundary movement patterns for each vowel. Whereas [ʌ] and [ɪ] tokens showed statistically significant differences in categorization as English proficiency increased, tokens of [ɛ], [ʊ], [æ], and [ɑ] did not. A closer analysis to F1 and F2 values showed that even though [ɪ] tokens have formant values that are much closer to Spanish /e/, more proficient L2 speakers prefer to categorize it as /i/; on the other hand, [ʌ] tokens were categorized in the group of more proficient L2 speakers as either /e/, /a/, /o/, or /u/ (although /o/ was the main preference). This pattern suggests that certain vowels are subject to different perceptual strategies, which cannot be explained only in terms of distance in the F1-F2 space; rather, more L2 input allows listeners to remap L2-like vowels in an L1 context onto native categories that can be farther away than others. Further considerations can be made for modeling perceptual grammars, in which input would play a fundamental role in the creation of category boundaries.

Verbal bracketing paradoxes: What heavy drinkers can tell us about movement

Zoe Belk (UCL)

Conventionally, the term *bracketing paradox* refers to a word or phrase where the (morpho)phonological bracketing and semantic bracketing conflict (see e.g. Williams 1981, Pesetsky 1985, Hoeksema 1987). Examples like those in (1), with the semantic bracketing on the left and the phonological bracketing on the right, are paradoxes because the meaning of the phrase and the order of affixation conflict.

(1) a. [[unhappi]er] vs. [un[happier]] b. [[nuclear physic]ist] vs. [nuclear [physicist]

Traditional bracketing paradoxes have been analysed as having two distinct structures, one syntactic and one morphophonological, that are reconciled using a Mapping Principle (Sproat 1988). This idea is consistent with data from Dutch, which show that traditional verbal bracketing paradoxes differ in the behaviour of a declensional schwa that appears on prenominal modifiers in certain contexts. In (2a) the schwa is obligatory while in (2b), a bracketing paradox, it is disallowed. This is expected if bracketing paradoxes have a different underlying structure than normal adjectival modification.

(2) a. de beroemd*(-e) gitarist
the famous(-DECL) guitarist
b. de klassiek(*-e) gitarist
the classical(-DECL) guitarist

Deverbal nouns in *–er* show similar behaviour to bracketing paradoxes when combined with an adjective. In examples like (3), the adjective can optionally receive an adverbial reading, modifying the verb within the noun:

(3) a. heavy drinker b. hard worker c. beautiful dancer

I argue that these are in fact bracketing paradoxes, as there is a mismatch between the two bracketings. Furthermore, the paradoxical meaning is entirely compositional, *pace* Larson 1995: one semantic structure for (3a) is [[heavy drink]er]. There are several other similarities between these types of bracketing paradox, but there is also a key difference: unlike traditional bracketing paradoxes, these verbal bracketing paradoxes require the declensional schwa in Dutch, as in *mooi*(-e) danser* (beautiful dancer).

Verbal bracketing paradoxes are restricted to a certain class of adverbs/adjectives. The adverbial forms of these modifiers usually follow their verb, unlike the modifiers in traditional bracketing paradoxes. Due to these properties, and the behaviour of the declensional schwa in Dutch, neither a head movement analysis nor a parallel analysis to Sproat's (1988) is appropriate for verbal bracketing paradoxes. Instead, I propose that a process of rebracketing at LF can account for these properties, as well as several others. This rebracketing is constrained by the principle of Information Preservation (4):

(4) PRESERVATION OF HEADEDNESS: Do not destroy headedness relations
PRESERVATION OF HIERARCHY: Do not destroy c-command relations between non-heads.

This analysis has the result that only the change in structure depicted in (5) is permitted, under the assumption that the affix is the head of the structure:

(5) [heavy [drink er]] → [[heavy drinker] er]

Rebracketing can be seen as a type of movement that doesn't leave a trace. Viewed in this light, the constraints in (4) are really constraints on movement in general, but where movement leaves a trace, the trace satisfies these requirements.

This principle captures the intuition that movement should not be a free-for-all, while avoiding the problems that plague Pesetsky 1985. Also notice that the underlying syntactic structure is that of normal adjectival modification, accounting for the Dutch schwa. The analysis therefore accounts for the properties of verbal bracketing paradoxes in Dutch and English while maintaining a restrictive theory of movement.

Agreement impoverishment in Gallo-Italian and the logical structure of VS constructions

Delia Bentley (University of Manchester)

In many SVO languages, VS order is characterised by the impoverishment of agreement exponence on V (Corbett 2006: 185-188, 197-204, among others). Agreement impoverishment has received a great deal of attention in the syntactic literature, since it raises important questions on the architecture of the clause and on the divide between null-subject and non-null-subject languages (Burzio 1986, Rizzi 1986, Samek-Lodovici 2002, Manzini & Savoia 2005/I, among others). In much of the literature it is also noted that agreement impoverishment varies in accordance with parameters such as the Aktionsart of V and the definiteness of S (Tortora 1997, 2014, Savoia 1997: 232, Parry 1997: 243, 2000, 2013). However, the extent of this variation, and its rationale, is still poorly understood. Considering evidence from ten Gallo-Italian dialects spoken in the North of Italy, in this talk I examine the interrelatedness of agreement impoverishment with the semantics of VS constructions.

In eight of the dialects investigated, one finds a split in finite number agreement of V with S (henceforth V-S agreement) which would at first seem to be amenable to an analysis in terms of the Unaccusative Hypothesis (Perlmutter 1978, 1989, Burzio 1981, 1986).

(1) a. An ciamà i tò gent / tanti malà. (Milan Àffori, Lombardy)
have.3PL called the.PL your people many people
'Your parents / Many patients have called.'

b. Gh' è rivà i tò surèi / di pac.
LCL be.3SG arrived the.PL your sisters some parcels
'There arrived yours sisters / some parcels.'

On further inspection, one finds both dialect-internal and cross-dialectal variation in V-S agreement with unaccusatives, a result which is difficult to accommodate within an account of agreement impoverishment in terms of unaccusativity. Importantly, verbs of internal causation (Levin & Rappaport Hovav 1995: 89-101), including change-of-state ones, prove to be resilient to agreement impoverishment. Since predications with change-of-state verbs of internal causation test out as unaccusative in the light of well-known diagnostics, this is a serious challenge to an analysis of agreement impoverishment in terms the unaccusative-vs.-unergative divide. Finite number agreement is also obligatory with a class of specifics, namely personal pronouns, although there is cross-dialectal variation in the third person. In the eight dialects which exhibit the split mentioned above, agreement impoverishment consistently correlates with the surfacing of a non-referential locative clitic, exemplified by *gh(e)* in Milanese (cf. 1b). This clitic also figures consistently in existential sentences.

Building upon existing analyses of existential sentences (Francez 2007, 2010, Bentley in press, Cruschina in press), I argue that in the eight dialects where the non-referential locative clitic appears in concomitance with agreement impoverishment, agreement is impoverished in predications on an implicit argument. These are structures where the whole eventuality described by V and S is predicated of an implicit spatio-temporal domain, which I claim to be comparable to the implicit argument of existential sentences (Francez 2007, 2010). In these structures, V is informationally light in its context (Levin & Rappaport Hovav 1995: 220-260), while S is not the core argument of the main predication. Accordingly, it does not receive a macrorole, and it cannot control agreement on V (Van Valin 2005: 108). I propose a semantic representation - or logical structure (Van Valin & LaPolla 1997, Van Valin 2005) - for these constructions, where the eventuality described by V and S takes the semantic position of an existential pivot. This is the same position as that of a stative, property-concept, predicate. On the basis of the proposed logical structure, I explain the specificity and Aktionsart restrictions introduced above. I capture agreement impoverishment in the two remaining dialects as a straight correlate of focus, building upon work by Samek-Lodovici (2005), Manzini & Savoia (2005/I: 316-22), and Parry (2013).

Preserving "Germanic" syntax via "exotic" means: V2 in modern Afrikaans

Theresa Biberauer (University of Cambridge & University of Stellenbosch)

Intro: Despite extreme deflection, speculation about potential creoloid status, and sustained contact with English, all matrilectal modern Afrikaans (MA*)* varieties are firmly V2. In fact, MA has more V2 than any other Germanic variety. How and why are the focus of this paper.

Data: MA's embedded declarative V2 profile includes both expanded comp(lementiser)less declarative embedded V2 options and "Mainland Scandinavian"/MSc-type embedded V2 (Vikner 1995): while German and MSc mirror one another, the former requiring C-**drop** and the latter overt C-**realisation** to license embedded V2, MA permits both, the maximally generalized pattern. Additionally, it permits V2 as an option in embedded *wh*-structures:

(1) a. *Ek wonder wat* ***eet*** *hulle saans* (***eet***).
I wonder what eat they evenings eat = 'I wonder what they eat in the evenings.'

b. *Ek sal uitvind hoe* ***kom*** *ons by die gebou in* (***kom***).
I shall out.find how come us by the building in come
'I will find out how we (can) get into the building.'

Entirely absent in full V2 languages, V2 with *wonder*-predicates is possible in some colloquial English varieties (McCloskey 2006), while V2 with *discover*-predicates is ungrammatical even in these varieties. In MA, V2 all selected *wh*-complements can be V2. Further, many speakers also permit V2 with an overt interrogative C, another pattern not attested elsewhere in Germanic:

(2) *Ek wonder* ***of sal*** *hulle ons kom besoek?*
I wonder if shall they us come visit = 'I wonder if they will come visit us.'

Analysis: MA's "über-Germanic" V2 profile originates in 2 "exotic" innovations: clause-final negative concord marker, nie_2, and negative imperative marker, *moenie*.

(3) a. *Hulle koop* nie_1 *koerante* $\mathbf{nie_2}$.
they buy not newspaers POL = 'They don't buy newspapers.'

b. ***Moenie*** *jou paspoort vergeet* $\mathbf{nie_2}$*!*
must.not your passport forget POL = 'Don't forget your passport!'

Both arose during the early 19th century in the Cape Dutch contact situation, as an emphatic tag resumptive aimed at L2 Dutch speakers and a calque on Malay/Asian Creole Portuguese negative imperative marker respectively. Both were incorporated into standard Afrikaans in 1925, as part of a conscious attempt to "engineer" the clear linguistic distinction between Afrikaans and Dutch needed to accord Afrikaans official-language status. An initially clause-external discourse element, nie_2 today instantiates a CP-peripheral Pol(arity) head (Biberauer 2008), which triggered an across-the-board reanalysis of negative clauses as PolPs:

(4) $[[_{\mathbf{CP[+v]}}\ [_{TP[+V]}\ \ldots]]\ nie_2] \rightarrow [_{\mathbf{PolP}}\ [_{CP[+V]}\ [_{TP[+V]}\ \ldots]]\ \text{Pol}=nie_2]$

Under the influence of the Input Generalization (IG; Roberts 2007) acquisition bias, acquirers aim to maximize features postulated on the basis of the input. Thus CP>PolP was extended from negatives to interrogatives (both non-veridical Pol). As PolPs, MA *wh*-clauses are "bigger" than Germanic V2-CPs; thus V-to-C is always available without violating the constraint banning moved elements from selected C (McCloskey 2006; cf. also Truckenbrodt 2006); hence (1). Generalization of CP>Pol to declaratives explains the extension of comp-less embedded V2 beyond large-complement-taking predicates, while (2) reflects the merger of the disjunction marker *of* ('or'), plausibly a spellout of Pol (Holmberg 2013), with interrogative C, i.e. generalization over the *of*-specific input, producing a single, underspecified item. More conservative speakers resist this reanalysis as they generalise the overt-C input, treating all overt Cs as spellouts of Force. Crucially, IG has affected all MA speakers, the difference being the pattern serving as the basis for their extended generalizations. *Moenie*, too, has been central in determining Afrikaans' V2 character. It eliminated Dutch's OV directive infinitive, replacing it with a structure cueing **both** OV **and** Force-centred V2. Even in heavily English-influenced Kaaps, *moenie* is completely incompatible with the VO orders possible in many non-imperative contexts: although it is today unambiguously a negative-imperative Force-marker, speakers clearly still analyse it as an element that parallels finite verbs which raise to C.

The phonological exponents of Welsh ICM: Subtraction by addition

Florian Breit (UCL)

Welsh Initial Consonant Mutations (cf. Hannahs 2011 for an overview) are phonologically regular alternations in word-initial consonants under specific morphosyntactic conditions, illustrated in (1). They pose a continuing challenge for phonology because they involve a productive, phonologically regular change under the apparent absence of a local phonological trigger.

(1) Nasal Mutation (NM): /p, t, k, b, d, g/ → [m̥, n̥, ŋ̊, m, n, ŋ]
Aspirate Mutation (AM): /p, t, k/ → [f, θ, x]
Soft Mutation (SM): /p, t, k, b, d, g, m/ → [b, d, g, v, ð, ∅, v]

Even though there have recently been many new proposals as to their morpho-phonological implementation, there remain some unsatisfactory issues principally relating to the way the phonological changes is captured and motivated. Even in feature-theoretic accounts which posit an underlying morphological trigger (e.g. Kibre 1997 and Pyatt 1997), the required featural augmentations are essentially arbitrary, and have to be accounted for by similarly arbitrary rules or positing radically underspecified forms in conjunction with coalescence. Proposals based on subcategorizing full substitution of the initial consonant (Hannahs 2013a, 2013b) fail to account for both the phonological regularity and the fact that some speakers extend mutations to apply to the non-native affricates /tʃ, dʒ/ and AM to apply to /m, n/ (cf. Kibre 1997, King 2003). Proposals which posit massive allomorphy (Stewart 2004, Green 2006, 2007) and essentially regard ICM as lexically fossilized crucially fail to account for productiveness in addition to the same flaws as the subcategorization account. Recent element-theoretic[1] accounts (Buczek 1995, Cyran 2010) manage to vastly simplify the required changes, but are not tied into the morphology and need to account for some changes through loss of elements rather than composition, as would be expected if morphology introduces new material that is integrated. Crucially, due to absence of explanatory principle, their changes remain arbitrary and unmotivated.

Building on the idea of mutations being realised by a morphological exponent (Ní Choisáin 1991, Kibre 1997, Pyatt 1997) and the phonologically stream-lined elemental account of Cryan (2010), I propose that the morpho-phonology of Welsh ICM is best captured by a floating-feature account (cf. Trommer & Zimmermann 2014, Trommer, to appear) where the integration of a single floating element can displace other melodic content due to general constraints, and so account for the loss of melodic material in a subset of mutations. Specifically, I posit that there are two constraints conceptualised in terms of Backley's (2011) element antagonism, *|H,L| which forbids representations with both of the laryngeal elements |H| and |L| unless one of them is a head, and *|H̲,ʔ| which forbids the stop element with a fricative-encoding head. NM and AM are accounted for straight-forwardly by making their exponents headed |L̲| before stops and headed |H̲| before fortis stops respectively. The loss of the stop element in AM is due to *|H̲,ʔ|. SM has the exponents zero before |I,ʔ,L|(={n}), |L| in the context of the natural class |H,ʔ|(={p,t,k,r̥,ɬ}) and headed |H̲| before the natural class |L,ʔ|(={b,d,g,m}). Again *|H̲,ʔ| causes loss of stopness in {b,d,g,m} making them fricative. *|L,H| causes loss of |H| in {p,t,k,r̥,ɬ} making them voiced. Non-native /tʃ,dʒ/ fall straight-forwardly in the SM natural classes and are thereby captured. The extension of AM to nasals proceeds along similar lines.

[1] On Element Theory see e.g. Harris 1994, Backley 2011

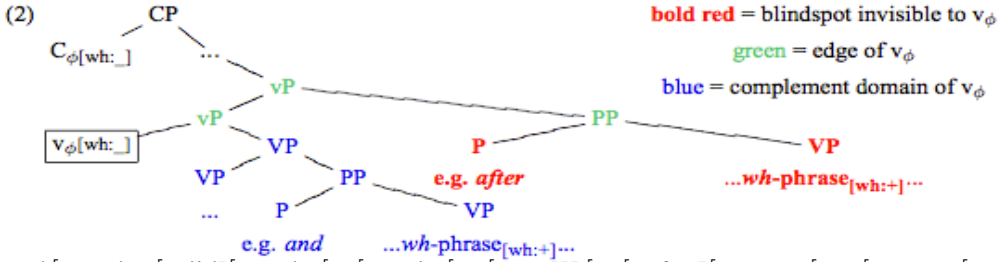
Blackholes and subextraction from pseudocoordinate adjuncts
Jessica Brown (University of Cambridge)

Puzzle: apparently semantically-driven extraction A core assumption of the Y-model of grammar is the strict separation of syntax and semantics, meaning i.a. that the semantics cannot license movement. Extraction from within a conjunct in (1) however is possible just so long as a single event interpretation of the two conjuncts is available (Schmerling, 1975; De Vos, 2005). Such extraction seemingly contradicts both the autonomy of syntax and the Coordinate Structure Constraint which prohibits asymmetrical extraction from within a conjunct (Ross, 1967). Previous semantic accounts of the Coordinate Structure Constraint (Goldsmith, 1985; Kehler, 1996) take (1) as a true counterexample to an autonomous syntax. In contrast, the syntactic accounts in De Vos (2005); Wiklund (2007) maintain an autonomous syntax but fail to derive asymmetrical extraction where one conjunct includes an argument DP (e.g. *Who did Lizzie take an axe and whack to death?* Schmerling, 1975:(33),217).

(1) Which car$_i$ did I [$_{V1}$ go] and [$_{V2}$ buy t_i]? (cf. Ross, 1967:(4.108a,b,c),170)

Proposal: blackholes in free adjuncts to ϕP I derive the availability of pseudocoordination in an autonomous syntax. First, pseudocoordinate *and* heads an adjunct (cf. De Vos, 2005, for tests distinguishing pseudo- and true coordination). Extraction from within pseudocoordination is then surprising in light of the otherwise well-attested prohibition on extraction from within adjuncts in (3a) (Cattell, 1976; Huang, 1982). Second, pseudocoordinate adjuncts merge at VP (non-phasal) level whilst tensed adjuncts merge at vP (phasal) level, if single events are licensed below vP (cf. Ernst, 2002), and pseudocoordinate but not tensed adjuncts form single events with the matrix predicate. Syntactic support for distinct positions of base generation comes from adverb scope tests: whilst VP-adjuncts like *loudly* can modify the transparent matrix predicate-pseudocoordinate adjunct complex *go and buy which car* as a whole, suggesting merger to VP, *loudly* cannot scope over the opaque *cry after Mary hit who* in (3a), suggesting merger to a position higher than VP, e.g. vP. Third, positions within adjuncts to maximal projections of a phase head ϕ form a 'blackhole' within Chomsky's (2000,2001) phase theory of movement, as vP-adjunct nodes neither *c*-command v_ϕ nor are *c*-commanded by v_ϕ. In consequence, vP-internal elements (in red) can neither check the uninterpretable [wh:_] feature on v_ϕ in their in-situ position, nor be probed for by v_ϕ in order to undergo movement to a Spec,vP position from which they would be able to check the uninterpretable [wh:_] feature on v_ϕ. The [wh:_] feature on v_ϕ therefore remains unchecked at LF, violating the Principle of Full Interpretation and yielding illformedness.

(2)



(3) a. *[$_{CP}$Who$_i$[$_C$did][$_{TP}$John[$_{vP}$[$_{vP}$~~John~~[$_{VP}$[$_V$cry]]] [$_{PP}$[$_P$after][$_{TP}$Mary[$_{vP}t_i$[$_{vP}$~~Mary~~[$_{VP}$hit t_i]]]]]]]]]?

b. [$_{CP}$Which car$_i$[$_C$did] [$_{TP}$I[$_{vP}t_i$[$_{vP}$ ~~I~~[$_{VP}$[$_{VP}$[$_V$go]] [$_{PP}$[$_P$and][$_{VP}$buy t_i]]]]]]]]?

(4) a. Participial: [$_{CP}$What$_i$[$_C$did][$_{TP}$John[$_{vP}t_i$[$_{vP}$~~John~~[$_{VP}$[$_{VP}$arrive] [$_{PP}$[$_P\emptyset$][$_{VP}$whistling t_i]]]]]]]]?

b. PP: [$_{CP}$What temperature$_i$ [$_C$should][$_{TP}$I[$_{vP}t_i$[$_{vP}$~~I~~[$_{VP}$[$_{VP}$wash my jeans] [$_{PP}$[$_P$at][$_{DP}$ t_i]]]]]]]]?

I extend the account to (4a) (Borgonovo et al. 2000; Truswell, 2011); and to (4b) (Sheehan, 2010: (16a)). **In conclusion**, I have used phase theory to provide a unified account of adjunct islands and the otherwise surprising locality phenomena in pseudocoordinate (1), participial (4a) and canonical prepositional (4b) constructions. Significantly, the analysis reconciles two seeming counterexamples to the autonomy of syntax with standard syntactic assumptions.

A minimum-description length measure of exponence complexity

Matthew Carroll & T. Mark Ellison (Australia National University)

In this paper we apply the informational-theoretic concept of description length (Rissanen 1985) to the quantification of the exponence complexity of a language's inflectional system.

Stump (2014) distinguishes three dimensions of complexity in inflectional systems: *exponence*, *implicative* and *interface* complexities. Exponence relations (see Stump 2006) map content paradigms to forms. Canonical Exponence (Corbett 2009) occurs when we have biunique exponence relations: the values of each content feature are realised by alternative values in exactly one rule block. Exponence complexity refers to how greatly a relation deviates from this canonical expectation. Much of the work on exponence complexity expresses it in descriptive linguistic terms. In this paper, we propose a computational measure of this complexity.

Minimal description length (MDL, Rissanen 1985) is a method for evaluating generalisations of a data-set that prefers generalisations minimising the sum of the information required to express the generalisation, *and* to code the data-set given the generalisation. It is a model-restricted version Kolmogorov complexity, and can be cast as an implementation of Bayes' Theorem. To use MDL for as a measure of linguistic complexity, it is important that the information of linguistic representations – rather than arbitrary computational representations – are measured.

We are not alone in using MDL to measure morphological complexity. Sagot and Walther (2011) have also used MDL, and like us, they define morphological complexity as deviations from Canonical Inflection. However, we would argue that their work is limited by failing to distinguish the three types of complexity mentioned above. Consequently, their measure is unable to identify exponence complexity per se.

THE RULE BASED MODEL OF THE EXPONENCE RELATION

Languages and paradigms can vary in the number of content features they represent in a single form. For cross-linguistic comparison, it therefore is reasonable to scale the description length by the number of distinctions they attempt to express (operationalized as the sum of the degrees of freedom in each content feature). Here for comparison are the exponence complexities of partial regular verbal paradigms for 4 languages:

English	Swahili	Turkish	Ngkolmpu	
6.8	13.4	13.7	23.8	bits / df

The complexity measure distinguishes between the canonical exponence of English with vast syncretism across person-number, and the largely canonical exponence of Swahili and Turkish with relatively little syncretism. Ngkolmpu displays extensive non-canonical exponence, and so larger complexity still.

In conclusion, an MDL measure of the rules defining the exponence relation offers a useful measure of exponence complexity.

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Ibero-Romance above the CP: Evidence from complementizer distribution and the encoding of interlocutor-oriented elements

Alice Corr (University of Cambridge)

This paper examines main clause instances of the Ibero-Romance complementizer *que* 'that', as frequently attested in informal conversational registers:

(1) A: *Toma, garda isto.* B: *Que eu non o quero!*
take.imp look.after.imp this que I not it.cl want.1sg
'A: Here, hang on to this. B: (But) I don't want it!' (Galician)

(2) *Fes-ho ja, que creus que tinc tot el dia?!*
do=it already que think.2sg that have.1sg all the day
'Do it at once! Do you think I've got all day?!' (Catalan)

(3) *Ai, que eu não tou com paciência hoje!*
oh que I not be.1sg with patience today
'Oh! I have no patience today!' (Brazilian Portuguese)

These matrix uses of *que* have a number of heterogeneous functions, variously characterised in the literature (Porroche Ballesteros 2000; Etxepare 2008, 2010; Demonte & Fernández Soriano 2013, 2014; i.a.) as having quotative, echoic, evidential, exclamative, or explicative/ causal value. We revisit the syntactic analysis of matrix-*que* clauses in light of recent work on the encoding of speech-act information above the CP (Speas & Tenny 2003, Giorgi 2010, Sigurðsson 2010, Haegeman 2014, i.a.), to ascertain the internal structure of such clauses and how they fit into the wider structural and discourse context. Taking as our diagnostics a set of items located in a putative Speech Act Phrase (Speas & Tenny 2003), such as vocatives, discourse particles and interjections, which we argue to be visible to syntactic computation (cf. Munaro 2010), we claim that the patterning of the empirical data collected across Ibero-Romance dialects reveals hierarchical ordering constraints relating to the use of *que* in conversation, indicating a decomposable syntactic structure in this domain. The results thus corroborate independent cross-linguistic work on other syntactically-encoded speech-act phenomena, constituting strong proof of a speech-act domain at the height of the sentential architecture, whose mappings can be tested with the Ibero-Romance data.

Specifically, although one of the uses of matrix-initial *que* is to encode clause type (in ForceP), it can also encode different flavours of illocutionary force: we distinguish between 'quotative' *que*, with a reportative function encoded in EvidentialP; 'exclamative' *que*, encoded in an Attitudinal projection (cf. Haegeman 2014; Paul 2014); and 'conjunctive' *que*, which shows properties of both co-ordination and subordination and is argued to surface in a Performative projection, the highest position of the Speech Act Phrase.

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The grammaticalization of clitic doubling in Romanian

Ileana-Blanca Croitor (Institute of Linguistics, Bucharest)

In modern Romanian (MR), clitic doubling of the direct object (DO) occurs in certain semantic and pragmatic contexts, where the position relative to the verb is important. Preverbal DOs are doubled even if they denote –animate entities, on the condition that they are +specific (a semantic property associated with the presence of the definite article). Postverbal doubled DOs must be +human, +specific (GR: 136–139) and they are always marked with the prepositional marker *pe* (literally 'on', homonymous to the locative preposition). It was shown that clitic doubling of a preverbal DO marks its displacement from its base position to the left of the sentence (Hill & Tasmowski 2008), a topicalized position; the doubling of a postverbal DO is associated with certain semantic and pragmatic conditions on the DO (Hill & Tasmowski 2008).

In old Romanian (OR) the contexts with clitic doubling were quite different from MR; for instance, strong pronouns preceded by the prepositional marker could be doubled or not:

(1) a. Învaţă şi **pre mine** ceva (FD: 527r)
teach also DOM me something 'Teach me something as well'
b. Nu ispiti răii, să nu **te** urască **pre tine** (CC^2: 216)
not tempt bad.PL SĂ$_{SUBJ}$ not CL.2SG.ACC hate DOM you.ACC
'Don't tempt the bad ones, so that they don't hate you.'

Moreover, strong pronouns could lack the prepositional marker as well as the doubling clitic:

(2) vrea- veri să vindec **tine**? (CC^2: 158)
want=AUX.FUT.2.SG SĂ$_{SUBJ}$ cure you.ACC 'Do you want me to cure you?'

Postverbal DO could be doubled even in the absence of the prepositional marker, sometimes even if inanimate:

(3) nu **l-** au pus el **acel bir** (DÎ: XXXVIII)
not CL.3SG.ACC AUX.PERF put.PPLE he that tax 'They didn't install that tax'

Based on a corpus of texts from OR, I propose several hypotheses for the emergence and generalization of clitic doubling in Romanian: (i) the need to distinguish the DO from a locative adjunct, as the prepositional DO with *pe* 'on' emerged from a locative adjunct and in the early stages, the interpretation could be ambiguous after transitive verbs; (ii) the influence of translations from old Slavonic; (iii) the contamination of two different structures, with a clitic (*îl văd* 'I see him') and with the prepositional marker (*văd pe Ion* 'I see John') – see also Onu 1959: 206; (iv) the re-interpretation and grammaticalization of structures with right-dislocation, of the type *The book, I saw it*. where the pronoun 'it' would be expressed by a clitic in Romanian (for a similar phenomenon in Spanish, see Gabriel & Rinke 2010), in certain semantic and pragmatic contexts.

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Fractions, scales and granularity

Chris Cummins (University of Edinburgh)

Modified fractions and percentages ("more than a third", "less than 10%") are widely used to convey numerical quantity information, including in high-stakes contexts. In addition to the practical significance of this domain, the study of the meanings of modified fractions is of considerable theoretical interest, as it offers an ideal testbed for hypotheses about how scale structure and granularity affect pragmatic meaning. Despite this, the topic has been little studied (one exception being Solt 2011 on "more than half").

My research exploits the idea that modified fractions will give rise to quantity implicatures that refer to the next coarse-grained scale point (as shown by Cummins, Sauerland and Solt 2012 for integers: "more than 70" implicates "not more than 80"). In principle, this suggests that we can use implicature as a tool for probing the scale structure of fractions, and thereby learn more about numerical cognition. For example, does "more than a quarter" implicate "not more than a half" – and if so, does it also implicate "not more than a third", or even "not more than three tenths"? The (un)availability of such implicatures tells us what constitutes a salient alternative in the domain of fractions, which in turn should reflect the cognitive effort involved in accessing and manipulating particular numerals.

In this presentation, I discuss a series of experiments designed to test the pragmatic enrichments that follow from the use of distinct classes of modified fraction. The experiments were fielded on Amazon Mechanical Turk and participants were asked to state the range of interpretation that they felt corresponded to each modified fraction under test. The expressions were presented in the context of a cover story in which they were described as summaries of survey findings.

As predicted, pragmatic bounds were inferred in a large number of cases (i.e. the range of interpretation was stated to be narrower than would be expected on pragmatic grounds alone). Examining specific responses, some of these bounds can be attributed to classical quantity implicatures on the appropriate fraction scale ("more than three fifths" implicating "less than four fifths"), but many others involved comparison with an alternative of a coarser granularity ("more than a fifth" implicating "less than a quarter") or, in some cases, a finer granularity ("less than a fifth" implicating "more than a tenth").

I discuss the implications of these findings for Krifka's (2009) account of granularity, arguing that the behaviour of fractions appears to suggest that a broader construal of scales is needed (notably relaxing the requirement of co-incident scale points, and not identifying coarser-grained scale points as necessarily more salient). I also consider the practical consequences of these pragmatic enrichments for the communication of quantity information involving modified fractions, focusing particularly on the case of medical communication.

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The effect of the perception of distance on complement order preference in two types of Double Complement Constructions: Evidence from a picture-sentence matching task.

Sam D'Elia (University of Kent)

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

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

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

Background

Various studies have shown that the focus of visual attention has an effect on word order (e.g. Myachykov, Garrod, and Scheepers, 2012). In a change blindness study, Mazzo, Turatto, and Umiltà (2005) showed that an object that is nearer to the perceiver is more likely to be the focus of attention compared to one that is perceived as being relatively further away. Vogels, Krahmer, and Maes (2013) build on these findings to show that perception of distance can affect the production of an active or passive construction when describing a visual scene. They found that participants produced more sentences where the sentential subject corresponded with a person that was perceived to be closest to them in an image, irrespective of whether that person was the agent of the action described by the verb or not. The present experiment tests the effect of this property of visual scenes on the alternations in (1) and (2), and demonstrates that perception of distance affects participants' preference for one of the two constructions.

Experiment

The experiment reported on here presented 49 participants with images that showed two objects at different depth planes. In this, I follow Mazzo, Turatto & Umiltà (2005), who make a distinction between objects located on different depth planes rather than a foregrounded object against a homogenous backdrop, as this introduces competition for attention between the available objects. The images were accompanied by two sentences: either a dative construction (1a) and a double object construction (1b), or a locative construction (2a) and a *with*-variant construction (2b). I controlled for a number of features that are known to affect attention allocation and word order preferences (phonological weight, number, definiteness, animacy, and colour). The items whose distances were manipulated corresponded to the grammatical objects in the sentences.

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

Based on these results, I argue against the approach to the dative and *spray*/*load* alternations that views each construction as having a distinct meaning (e.g. Oehrle 1976; Goldberg, 1995; Beavers, 2005; Rappaport Hovav and Levin, 2008). A difference in semantic interpretation cannot account for the experimental data showing that visual information can influence the choice of the alternations in (1) and (2) when describing a scene.

The "shadow phonology" of Anglicisms in Czech

Tomáš Duběda (Charles University in Prague)

Anglicisms are a visible and dynamic lexical phenomenon in European languages (Görlach 2001). In languages like Czech, the lexical, stylistic, sociolinguistic and normative aspects of Anglicisms arouse keen interest, while literature on their phonology is almost non-existent, with the exception of pronunciation dictionaries (Romportl 1987). Their specificities are mostly formulated as exceptions to domestic phonology.

In this paper, we will analyse phonological aspects of Anglicisms in Czech from the perspective of Loanword Phonology (Calabrese & Wetzels 2009; Kang 2011), which models loanword adaptation as a "repair" of an "illegal input" (e.g. *jazz* /ʤæz/ → /ʤɛs/, where the vowel is replaced by its nearest native counterpart, and the final obstruent is devoiced).

We will make the following claims:

(i) The interaction between native and non-native phonology is two-way: the repair strategies are defined by native phonology, which is, in turn, affected by newly introduced structures (stabilisation of foreign phonemes /f/, /g/, /ʤ/, /o:/; new phonotactic structures like word-final /nk/ etc.).

(ii) The adaptation processes (for a systematic survey of loanword adaptation processes in Czech see Author 2014a) are not random but may be formalised in the form of phoneme mapping rules.

(iii) Most deviations from these rules are explainable by morphological phenomena or analogy.

(iv) However, the different adaptation principles are frequently in competition, making Anglicisms phonologically more variable than native words.

(v) The pronunciation of Anglicisms in Czech can be best modelled by assuming a specific phonological subsystem, though deeply embedded in native phonology, which is activated each time a word is identified as an Anglicism. This subsystem is being "negotiated" against well-established loans, but also against the knowledge of English. It accounts for a "shadow phonology" of English within the Czech phonological system, and may also be a source of interferences in Czech learners' English.

These claims will be demonstrated by means of (a) an analysis of a full list of Anglicisms taken from a Czech dictionary (*Slovník současné češtiny*); (ii) an analysis of a recently completed pronunciation survey (Author 2014b). In this survey, 300 phonetically problematic items (including 148 Anglicisms), selected according to their frequency in a large corpus of Czech and integrated into carrier sentences, were pronounced by 300 native speakers. The database of the resulting phonological forms provides highly informative evidence of how the adaptation processes are structured according to lexical, grammatical and sociolinguistic criteria.

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Reversed Coordinated Multiple Wh-Questions in Japanese: Another Argument for "Concealed Clefts"

Yasuyuki Fukutomi (Fukushima University)

Ishii (2014) argues convincingly that Japanese has a Coordinated multiple *wh*-question (CWH) with two *wh*-arguments, although it is a non-multiple-*wh*-language like English. He attributes the difference between Japanese and English to the existence of a scrambling operation in Japanese, which allows backward sluicing to obey the parallelism condition on ellipsis (Fox and Lasnik 2003):

(1) a. dare-ga sosite nani-o Mary-ni ageta no?
who-NOM and what-ACC Mary-DAT gave Q
Lit. "Who and what gave to Mary?"
b. *Who and what gave to Mary?

(2) [$_{CP}$ [$_{CP}$ dare-ga$_1$ [$_{TP(Elided\ Clause)}$ nani-o$_2$ [$_{TP}$ *t'*$_1$ [$_{vP}$ Mary-ni t_2 ageta]]] C_{1+Q1}] [$_{\&P}$ sosite [$_{CP}$ [$_{TP}$ nani-o$_3$ [$_{TP(Antecedent\ Clause)}$ t_1 [$_{vP}$ Mary-ni t_3 ageta]]] no]]

The required formal parallelism on ellipsis also accounts for the obligatory application of scrambling to the second conjunct of CWHs, although we may not be able to refer to the example (3) as CWHs because two *wh*-arguments are not apparently conjoined:

(3) *dare-ga sosite Mary-ni nani-o ageta no?

Interestingly, when the order of the first and second conjuncts in (3) is reversed, the sentence becomes acceptable:

(4) Mary-ni nani-o ageta no sosite dare-ga?

The difference in acceptability between (3) and (4) indicates that the sentence with forward deletion has a different derivation from that with backward sluicing; as is well-known, the example in (4) could be derived from a "concealed cleft" construction:

(5) Mary-ni nani-o ageta no sosite [~~$_{CP}$ [$_{TP}$ Mary-ni nani-ka-o ageta] no] wa~~ dare-ga
Mary-DAT something-ACC gave that-TOP who-NOM

In fact, a pronominal and a copular can appear in reversed CWHs (6), but not in "ordinary" CWHs as in (7):

(6) Mary-ni nani-o ageta no soiste (sore-wa) dare-ga da?
It-TOP who-NOM is

(7) *(sore-wa) dare-ga da sosite nani-o Mary-ni ageta no?

The fact that CWHs involves a full *wh*-movement and backward sluicing is confirmed by their sensitivity to the superiority effect, as pointed out in Ishii (2014):

(8) ?*nani-o sosite dare-ga Mary-ni ageta no?

Compare (8) with (1), in which *dare-ga* (who-NOM) moves to the SPEC of CP in the first conjunct, and it blocks the movement of *nani-o* (what-ACC), resulting in the superiority effect. Here again, reversing the first and second conjuncts ameliorates the acceptability of (8), since the corresponding reversed CWHs involve concealed clefts:

(9) a. dare-ga Mary-ni ageta no sosite nani-o
b. nani-o Mary-ni ageta no sosite dare-ga

(10) a. …sosite [$_{CP}$ [$_{TP}$ dare-ka-ga Mary-ni ageta] no]-wa nani-o
b. …sosite [$_{CP}$ [$_{TP}$ nani-ka-o Mary0ni ageta]no]-wa dare-ga

In summary, our proposal offers an additional evidence for "concealed clefts" analysis of forward sluicing in Japanese and in tandem with Ishii's (2014) analysis of Japanese CWHs by backward sluicing, it supports the larger claim of Hankamer (1972) that there is no mirror-image rule in syntax.

A typology of copulas and non-verbal predication in Bantu

Hannah Gibson, Rozenn Guérois & Lutz Marten (SOAS)

Bantu languages display a high degree of morphosyntactic variation which, although it has been often been noted (e.g. Bearth 2003), remains in many areas largely unexplored. A particularly intriguing area for cross-linguistic typologies of Bantu languages is copula constructions and non-verbal predication. Comprehensive comparative and typological studies of copulas in the world's languages are comparatively recent (e.g. Hengeveld 1992, Stassen 1997, Pustet 2003, Creissels 2014), and provide the background against which variation in Bantu can be considered.

Among salient properties of non-verbal predication in Bantu are prosodically marked predication (1) and the presence of morphologically different locative copulas (2):

(1) a. Òtjì-hávérò
7-chair
'Chair.'

b. Ótjì-hávérò.
7P-chair
'It is a chair.' (Herero, Kavari et al. 2012: 318)

(2) a. Ku-na ma-endelo sana.
SM.LOC-POSS.COP 6-development much
'There is a lot of development.'

b. Wa-tu wa-po.
2-person SM2-LOC.COP16
'There are people/people are there/available.' (Swahili, Marten 2013: 47)

In (1), predication is expressed solely by tonal marking on the nominal (a high tone on the initial vowel) which is also available in adjectival predication. In (2), both constructions can be used to express existence in a place or a more abstract existence. However, constructions like (2a) have a more rigid word-order and a narrower range of interpretations than those like (2b) – which may be related to the use of different morphological forms.

The current talk presents a typology of Bantu copulas and non-verbal predication based on the following parameters:

- Combinatorial properties – combination with nouns, adjectives, verbs
- Exponence – e.g. prosody/tone, clitic, invariant copula, complex copula, inflected copula
- Semantic contribution – 'be', 'become', 'be with', 'be at (a place)'
- Syntactic constraints – restrictions on the order of copulas with respect to subject, location, theme, etc.
- Interpretation – e.g. existential, locative-existential, presentative

Based on a sample of 12 (mainly south-eastern) Bantu languages, the talk will show both the distribution of different features throughout the sample, as well the co-occurrence of particular features in specific languages. The results of the comparison are embedded in wider studies of morphosyntactic variation in Bantu and the implications of this for typology, diachronic processes and language contact. They will also contribute to more comprehensive typologies and analyses of copulas and non-verbal predication in the world's languages.

The source of English headed wh-relative clauses

Nikolas Gisborne & Robert Truswell (University of Edinburgh)

English headed *wh*-relatives emerged in the 12th century. They were initially found low on the Keenan–Comrie Accessibility Hierarchy, and spread through the population of *wh*-words, and up the AH over the next 400 years. A common idea (e.g. Romaine 1982) is that this is a result of *renouvellement formel*: the language found existing forms to maintain the relativizing functions which had been carried out by OE demonstratives. Such an analysis holds the function constant and describes a change in the forms realizing that function. However, similar changes recur across Indo-European, in languages without pre-existing headed relative specifiers. It is impossible for the language to appropriate forms for a given function before that function exists. We therefore argue that a viable, general theory of such changes should instead hold the form constant and track changes in the functions associated with it. This approach is consistent with modern lexicalist syntactic theory, which construes a grammar as a population of lexical items, each associated with a specification of its grammatical characteristics.

Headed relatives (CPs modifying NP) and free relatives (CPs with the external distribution of NP) can each have a filled or empty specifier, and a filled or empty head. This gives a partial $2 \times 2 \times 2$ classification of relative clauses, as in (1). Although certain of these possibilities are ungrammatical today, nearly all of them (except ∅-marked free relatives) are attested in the history of English.

(1) a. **Headed relatives:** the meal {*which that*/*which*/*that*/∅} she ate
b. **Free relatives:** {*what that*/*what*/*that*/∅} she ate

The typological distribution of headed relatives with filled specifiers is skewed: c.$\frac{2}{3}$ of IE languages have them, but only 5% of other languages do (de Vries 2002). Moreover, Proto-Indo-European did not have headed relatives (Kiparsky 1995; Clackson 2007): instead, PIE relatives were free relatives, adjoined to the main clause, with specifiers containing **k^{w}i-/k^{w}o-*forms (also found in interrogatives) or **yo-*forms (also found in demonstratives). Headed relatives with filled specifiers have repeatedly developed from these adjoined constructions. The PIE initial state and these recurring changes jointly explain the synchronic typology. We focus here on the development of English free *wh*-relatives into headed *wh*-relatives: by tracking these changes in English, we acquire insight into how parallel developments can recur in related languages.

Although OE free *wh*-relatives are considered to be typically clause-initial and generalizing (e.g. in correlative constructions), c.$\frac{1}{3}$ of tokens are clause-final and definite. These properties imply a context for reanalysis: both free and headed relatives occur clause-finally, and there is significant semantic overlap between definite free relatives and headed relatives. This reanalysis context is stably present throughout OE, but headed *wh*-relatives only emerge in early ME. The relationship to the loss of demonstrative relatives is complex: high on the AH, argumental *se*-relatives disappear 100 years before argumental *wh*-relatives emerge; lower on the AH, headed relatives with *there* and *where* coexisted for c.250 years. This pattern argues against *renouvellement formel*: it is not the case that new types of relative specifier emerge when the old function–form relationship breaks down.

Instead, these changes arguably reflect patterns of lexical acquisition. Learners identify certain forms before they identify their functions (Shipley *et al* 1969). Change occurs when a learner associates a form with an input-divergent function (Cournane 2015). Pairing of forms with functions is guided by several interacting biases: an anti-homonymy bias militates against functional overlap between forms (e.g. *wh-* and *þe*), and a community bias favours similar functions for formally similar items (e.g. extension of headed *wh*-relatives to new forms). In this way, aspects of the history of English syntax can be accounted for using only statements about PIE and general theories of lexical acquisition and its relation to change. This is a step towards a general explanation of the skewed typological distribution of headed relative specifiers.

Glue Semantics for Minimalist syntax

Matthew Gotham (UCL)

The purpose of this paper is to provide an implementation of Glue semantics in Minimalist syntax. Glue was originally developed within Lexical Functional Grammar, and is now the mainstream view of the syntax/semantics interface within LFG (Dalrymple, 1999), but it is in principle compatible with any syntactic framework. I will also describe some ways in which Glue addresses empirical and conceptual difficulties that arise in more standard approaches to the syntax/semantics interface in Minimalism.

The guiding idea of Glue is that the syntactic analysis of a sentence generates a multiset of premises in a fragment of linear logic (Girard, 1987), and that semantic interpretation amounts to finding a proof to a specified type of conclusion from those premises. This allows for an analysis of quantifier scope ambiguity according to which a sentence such as 'someone loves everyone' can have two readings not because there is more than one syntactic analysis of it, nor because any of the words is polymorphic, but rather because there are two proofs to a type t conclusion given the premises that the (one) syntactic analysis of it generates.

The implementation of Glue in Minimalism that I will provide is based on the (widely-held, e.g. by Adger (2003)) assumption that the syntactic structure-building operations (merge, move, agree) are driven by the matching of syntactic features introduced by lexical items. The novel step consists in claiming that those features bear indices that also have to match for structure to be built, and that the indices provide the connection between lexical items and linear logic premises. I will argue that the use of indices in this Glue implementation is not subject to the criticism of indices made by Chomsky (1995), in that indices as envisioned in this approach *are* present in the lexicon.

I will argue that the Glue approach thus developed has certain advantages over quantifier raising (QR)-based accounts of scope ambiguity when it comes to the interpretation of DPs that have DPs embedded within them, such as 'an owner of every comic'. Without additional stipulations, the Glue approach is capable of delivering both the surface-scope and inversely-linked interpretations of this phrase. In contrast, the QR-based account put forward by Heim and Kratzer (1998, Ch. 8) requires the postulation of either a phonologically and semantically inert subject position within NP, or a dedicated type-shifting rule, or both, in order to derive these interpretations.

I will also argue that the proposed account gives some insight into the interpretation of structures created by (overt) movement. The standard view is that the position at the foot of a movement chain is interpreted as a variable (or perhaps some more complex structure, but still one containing a variable), and the position at the head of the chain is interpreted in such a way that it binds that variable. Since the abandonment of traces and indices in early Minimalism in favour of the copy theory of movement, this has necessitated some mechanism that can tell, for any constituent, whether or not that constituent has a copy elsewhere in the structure and, if so, whether it is the lower or the higher copy. Taking the Glue perspective on semantic composition means that there is no need for this kind of mechanism. I will give an implementation based on a multidominance approach to movement, according to which moved constituents are interpreted exactly once. The effect of variable binding arises because of the possibility of hypothetical reasoning in the linear logic proof, much as in categorial grammar. That is to say, 'traces' are just auxiliary assumptions, and binding traces amounts to discharging those assumptions.

Tonological evidence of the augment in Cuwabo (Mozambique, Bantu P34)

Rozenn Guérois (SOAS)

A typical feature of Bantu tones is their ability to mark lexical and/or grammatical distinctions. In this talk I show how different syntactic constructions in Cuwabo are associated with a specific tonal alteration, which consists in deleting the first underlying H of a word, usually a noun (along with the doubled H resulting from High-Tone Doubling). Such a tone process (unadequately coined 'Predicative Lowering' by Schadeberg and Mucanheia 2000), seems restricted to P30 languages, spoken North Mozambique, and was first discussed by Stucky (1979), followed by Kathupa (1983), Schadeberg and Mucanheia (2000) and van der Wal (2006), covering different Makhuwa varieties.

After exposing a few basic properties of the Cuwabo tonal system, I will examine the different environments in which "first-H Deletion" (glossed as 1HD) occurs. This includes non-verbal predication (1), focused nouns after conjoint verb forms (3b), the element following (most) negative tensed verbs (2), and vocative expressions (3a).

(1) *namárógoló namapuja* (cit.f. namápûja)
namárógolo **namapuja**
1a.hare 1a.joker.1HD
'the hare is a joker' {ddingi.10}

(2) *kaddaájá abalacáwu* (cit.f. *ábálacáwu*)
ka-ddi-á-já **abalacáwu**
NEG-1SG-PST.IPFV-eat 2.shrimp.1HD
'I did not eat shrimps' {semi-elic.}

(3) *supeéyó supeéyo míyó ddiḿfúná mulobwana* (cit.f. *súpééyo*)
a. **supeéyo** **supeéyo** b. míyó ddi-ní-fúná **mulobwana**
9a.mirror.1HD 9a.mirror.1HD 1SG.PRO 1SG-IPFV.CJ-want 1.man.1HD
'Mirror, mirror, I want a man' {maria.62}

The deletion of a H tone to express such constructions is not commonly attested cross-linguistically. By examining nominal predication and focus constructions in Makhuwa and comparing them to other Bantu languages, van der Wal (2006) postulates that they are diachronically related, under the scope of the Proto-Bantu augment. More specifically, the H tone affected by deletion would correspond to the Proto-Bantu augment (also known as pre-prefix). In this talk, I follow van der Wal's line and bring further evidence from Cuwabo with the First-H deletion of the element following a negative verb form (which does not occur in Makhuwa).

The cartography of 'yes' and 'no' in West Flemish

Liliane Haegeman & Andrew Weir (Ghent University)

Introduction. The paper is a study of the response particles *ja*/*nee* ('yes'/'no') in the Lapscheure dialect of Dutch: (i) The particles show overt φ-feature marking (1). (ii) In 'reversal' answers (2), they bear an additional marker, 'reversal schwa'. (iii) There are co-occurrence restrictions between the reversal particles, sentential particles and 'reversal *doet*' (2) (cf. Van Craenenbroeck (2010), henceforth VC 2010). We propose that the particles are inserted as TP proforms in a full clausal syntax; their φ-features are syntactically active and drive movement to the left periphery.

(1) a. Q: Goa Marie morgent kommen? A: Ja-s./Nee-s.
Goes Marie tomorrow come A: yes-3SG.F/no-3SG.F [Lapscheure]

b. Q: Een-k tyd? A: Ja-g./Nee-g.
have=I time yes-2SG/no-2SG

(2) A: K'een geenen tyd.
I=have no time

B: Ja-g-e. / Ba ja-g-e. / Ja-g-e doet. / *Ba ja-g-e doet.
yes-2SG-RVRS PRT yes-2SG-RVRS yes-2SG-RVRS do

Our presentation advances the debate on the status of response particles (e.g. Kramer & Rawlins 2010, Krifka 2013); the cartographic implementation of the analysis provides support for the role of SubjP as a dedicated projection for hosting subjects (Rizzi 2003, Rizzi & Shlonsky 2007).

Φ-feature marking as agreement. While in many dialects – including the Wambeek dialect described by VC 2010 – the φ-feature marking on *ja*/*neen* is homophonous with subject enclitics, in the Lapscheure dialect subject clitics and φ-feature marking on *yes*/*no* will be shown to crucially diverge in a number of contexts. Based on phonological evidence, we will analyse the word-final φ-feature marking on *ja*/*neen* in (1) and (2) as a *sui generis* agreement morphology.

***Ja*/*neen* as TP proforms.** As the agreeing forms of *ja*/*neen* are incompatible with TP-internal material (3a) and can only be followed by a separate utterance (3b), we follow Krifka (2013) in proposing that WF *ja*/*nee* are themselves TP proforms. We propose that as TP proforms the particles are merged in a full clausal structure and move to the left periphery.

(3) a. Ja-s (*goat morgen kommen). b. Ja-s. Ze goa morgen kommen.
yes-3sg.f (*goes tomorrow come) yes-3sg.f she goes tomorrow come

The φ-features match in *ja*/*neen* match those of the subject of a full clausal response. This 'subject-orientation' is a function of the presence of Subject Phrase (Rizzi 2003), which normally attracts a subject argument ('Subject Criterion'). We argue that φ-features generated in Fin^0 can satisfy the Subject Criterion (Rizzi & Shlonsky 2007) and they attract φ-feature marked *ja*/*nee*.

Reversal particles. We propose that the reversal schwa spells out a Verum Focus feature on the TP proform. This feature prompts movement to a left-peripheral PolFocP (VC 2010, Holmberg 2001, 2007, 2013, Lipták 2003, 2013, Authier 2013, Gribanova 2014). Motivation for the movement comes from the fact that while most auxiliaries, being TP material, cannot co-occur with *ja*/*nee*, the reversal auxiliary *doen* 'do' (VC 2010) can (4). As TP is a structureless pro-form, *doen* cannot merge within TP. In line with VC 2010, we propose that *doen* is merged in a PolP between TP and SubjP; the word order in (4B) means that *ja*/*nee* must have moved leftwards past *doen*. The co-occurrence restrictions in (2) will be shown to follow from the hypothesis that particles may move as X^0 or as XP (Muysken & Van Riemsdijk 1986).

(4) A: K'een geen tyd. B: Ja-g-e doet.
I=have no time yes-2SG-RVRS do

Selected references. **Van Craenenbroeck**, J. 2010. The syntax of ellipsis. OUP. **Krifka**, M. 2013. Response particles as propositional anaphors. *SALT* 23:1-18. **Rizzi,** L. & **Shlonsky**, U. 2007. Strategies of subject extraction. In *Interfaces + recursion = language?* De Gruyter.

In the conceptual metaphor literature, it has frequently been observed that time at the conceptual level is structured in terms of spatial experience such as motion through space. This relationship has been expressed by the TIME IS SPACE metaphor and its two distinct variants TIME IS THE MOTION OF OBJECTS and TIME IS (MOTION ALONG) A PATH (e.g., Grady 1997; Lakoff 1990, 1993).

In recent versions of Conceptual Metaphor Theory (CMT), these two variants of time have been proposed as primary metaphors for time (Grady 1997). The view that the TIME IS THE MOTION OF OBJECTS and TIME IS (MOTION ALONG) A PATH metaphors are primary metaphors is based on the claim that the primary source concept in each variant relates to a relatively simple *image concept*, e.g., the motion of objects, while the primary target concept, i.e., Time, relates to a phenomenologically simple *response concept*.

The present study considers the TIME IS THE MOTION OF OBJECTS and TIME IS (MOTION ALONG) A PATH metaphors (known also as Moving Time and Moving Ego metaphors, respectively) and based on the linguistic evidence suggests that there is not a single, relatively simple temporal concept which constitutes the primary target concept in these two mappings.

More specifically, building upon the principled polysemy model (Evans 2004, 2005, 2007), I examine the Greek lexical item *xronos* 'time' and I argue that the putative primary target concept in the TIME IS THE MOTION OF OBJECTS and TIME IS (MOTION ALONG) A PATH metaphors does not constitute a single unified concept which relates to a phenomenologically 'simple' experience but it rather relates to a complex category of temporal lexical concepts. In particular, examining data from the ILSP corpus, I present a detailed lexical-semantic analysis of the lexical item *xronos* and I show that this form is paired with six distinct lexical concepts. In the same way, the fact that there is a diverse range of motion events which serve to elaborate the distinct temporal lexical concepts suggests that there is not a single unified concept of motion either. Based on the linguistic evidence presented, it is argued thus that, although the two mappings capture the structure of thought at a certain level of generalization, they are not able to shed light on the particularities in terms of the meanings conventionally associated with the lexical item *xronos* nor can they account for the differential patterning in terms of the nature and the range of motion events which structure the distinct lexical concepts associated with the particular lexical item.

Accordingly, it is argued that the relevant metaphors may be stated at a too high level of abstraction and may not actually constitute primary metaphors, in the sense intended.

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Tense and finiteness in Swedish

Fredrik Heinat (Linnaeus University)

In Swedish, finiteness is morphologically marked by tensed verb forms, as in many other languages. However, it has for a long time been known that it is possible to leave out the finite auxiliary *ha* 'have' in embedded clauses in Swedish, so called *ha*-deletion, (1) (see Andersson and Dahl, 1974; Holmberg, 1986; Julien, 2002; Platzack, 1986). This possibility exists even in main clauses when *ha* does not occupy the verb second position, (2) (Holmberg, 1986; Platzack, 1986; Sells, 2005, 2007):

(1) a. Lisa sa att Eva (hade) läst boken.
Lisa said that Eva (had) read the book

b. Lisa påstår att Eva (har) ätit lasagne.
Lisa claims that Eva (has) eaten lasagna

(2) a. Lisa kanske (har) läst boken.
Lisa maybe (has) read the book

b. Kanske Lisa (har) ätit lasagne förut.
maybe Lisa (has) eaten lasagna before

The effect of *ha*-deletion is that a clause, which to all intents and purposes is finite, contains no finite verb form. Relying on the distinction between various types of finiteness (Adger, 2007; Sells, 2007), this talk presents an account of *ha*-deletion in the constraint based framework Lexical Functional Grammar. In Swedish, clauses have the property of being typed FINITE or NON-FINITE. This typing is in most cases done by means of a tensed verb, which is morphologically marked for finiteness. It is argued that in all conditions in which *ha* is optional, there is something else than *ha* that provides the clause with a Finite feature. The conclusion is that in Swedish there are several ways in which the feature Finite can be introduced in a clause: by the Phrase Structure-rule that licenses a subject (cf. Rosén 1996), by a complementizer, by an adverb marked Finite+, and by a finite verb.

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Does English pre-aspiration matter?

Míša Hejná (University of Manchester)

Although more and more languages are being reported to pre-aspirate (e.g. Morris 2010; Stevens & Hajek 2004; Gordeeva & Scobbie 2010), phonological descriptions of pre-aspiration typically focus on Icelandic, where the phenomenon is contrastive. In this paper, I would like to argue that pre-aspiration does matter for the phonological description of those varieties of English where the phenomenon is attested. First, as already established, contrastiveness is not the only aspect that could render pre-aspiration relevant for the phonology (Hall 2009). Indeed, in the first production analysis in this talk, I will demonstrate that pre-aspiration in Welsh English is conditioned phonologically rather than phonetically. Second, I will argue that it should not be taken for granted that only one or two phonetic cues (typically voicing and aspiration) are the unambiguously most important ones, and I will show that based on production data pre-aspiration is as important as post-aspiration, vowel duration, and other cues.

The analyses use data collected from 10 speakers of Aberystwyth English. Two different datasets will be used. For the first dataset, the respondents were recorded reading a list of words, in which the following vowels were combined with /p/, /t/, and /k/ in monosyllables and disyllables: /a/, /e/, /ɪ/, /ʊ/, /ʌ/, /ʊ/, /aː/, /oː/. This yielded tokens such as *pat*, *pet*, *pit*, *pot*, *putt*, *put*, *part*, *port*; *patter*, *pity*, etc., each read twice in a carrier sentence and once in isolation. In total, 6030 tokens were obtained. For the second dataset, tokens with lenis plosives were collected with the same vowels as the fortis plosives. This provided 640 tokens in total, and these were matched up with the fortis tokens collected for the first dataset. The phonetic cues to the fortis-lenis contrast could be analysed word-initially (*pack* vs *back*), word-medially (*capper* vs *cabbie*), and word-finally (*cap* vs *cab*), within a carrier sentence and in isolation.

The durational values of pre-aspiration show a bimodal distribution for 9 respondents. One of the peaks in the distribution is realised by zero values of pre-aspiration (i.e. pre-aspiration is absent in the tokens), which strongly suggests there are two categories: pre-aspirated and un-pre-aspirated. A question arises as for what exactly conditions whether pre-aspiration is present or absent. The durational patterns of pre-aspiration can be explained by phonological vowel height but not by phonetic vowel height. Furthermore, phonologically long vowels are associated with shorter pre-aspiration than short vowels, although phonetically it could be expected that if it is vowel duration that conditions pre-aspiration duration, the direction of the effect should be the same. Assessing three possible conditioning factors thus shows that although pre-aspiration is categorical, it is not obligatory and invariant, but optional and variable, yet phonologically conditioned. Finally, in word-medial and word-final position, pre-aspiration is found in 61-97% of all the tokens analysed, and pre-aspiration is as significant a cue to the fortis-lenis contrast regarding the frequency of its occurrence as well as duration in the variety as e.g. the duration of the preceding vowel or the duration of post-aspiration.

The conclusions are that pre-aspiration is an important aspect that should be considered in the phonological description of pre-aspirating varieties of English.

On the syntax of Yiddish adnominal possession

Kerstin Hoge (University of Oxford)

This paper addresses the syntactic structure of pronominal and non-pronominal possessive constructions in Yiddish, which have not yet been discussed in detail in the literature. Yiddish, like many other languages, allows both prenominal and postnominal possessors, as shown in (1).

(1) a. mayn shtub
my house
b. di shtub mayne
the house my-F.SG.NOM
c. der bobes shtub
the grandmother-*s* house
d. di shtub fun der boben
the house of the grandmother- DAT

More unusually, Yiddish also has indefinite possessive constructions, in which a pronominal or full DP-possessor occurs to the left of an indefinite article:

(2) a. mayne/mayns a shtub
my.SG.NOM/my-*s* a house
'a house of mine'
b. der bobes a shtub
the grandmother-*s* a house
'a house of my grandmother's'

The various possessive constructions found in Yiddish raise questions about (i) the commonalities between prenominal and postnominal constructions, (ii) the morphological marking of the different prenominal possessors, and (iii) the external and internal merge positions of the possessors in definite and indefinite possessives.
Addressing these questions, this paper argues the following:

(i) Prenominal (cf. (1c)) and postnominal (cf. (1d)) possessives do not originate in the same syntactic configuration (contra den Dikken 1998, Adger 2013). The claim is empirically supported by the asymmetric behaviour of prenominal and postnominal possessors with respect to their ability to co-occur with a PP-complement to the possessum (which is possible only for prenominal possessors).

(ii) The instances of *-s* found on DP- and pronominal possessors (cf. (1b) and (2a)) are homophonous but not identical: *-s* on a full DP is part of the exponence of genitive case, while *-s* on a pronominal possessor is an invariant affix that substitutes for a possessum NP in the head noun of a reduced relative clause.

(iii) Non-agreeing pronominal (cf. (1a)), agreeing pronominal (cf. (2a)) and full DP-possessors (cf. (1c), (2b)) in prenominal position occupy three distinct positions, as empirically supported by their respective orderings with respect to cardinality predicates and the universal quantifier. Yiddish possessive constructions thus provide evidence for the existence of three functional projections between D and Num.

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Feature-based variation and change: Imperatives in Shetland dialect

Elyse Jamieson (University of Edinburgh)

In recent years, there has been recognition that we need to take into account microparametric variation in order to understand the relationship between the universal and the particular in syntactic theory. While tradition of this has been established between languages and dialects, morphosyntactic variation at an *intra*-dialect level can be equally valuable in helping us to construct syntactic theory. Scots dialects have already been shown to be valuable in this field (e.g. Adger and Smith 2010). In this paper I will develop this further, using the example of verb movement to the left periphery in Shetland dialect.

The underlying word order of present-day standard English is subject-verb-object. Although standard English imperatives are often null-subject, they follow this SVO order when the subject is lexical, e.g. ***you take*** *one;* ***nobody move*** etc*.* This has been the case since the 18th/19th centuries (Denison 1998), when the last productive vestiges of English's historical verb-subject order were finally lost. However, this traditional verb-subject order is reported to be available to speakers of Shetland dialect in a number of constructions, including overt-subject imperatives (Jonas 2002). Examples can be found in dialect literature:

1. ***Shoo you*** *dem on an lat me win ta da Skjibbie Gio Disco* (Peterson 1993)
   Sow you them on and let me get to the Skjibbie Gio Disco
2. ***Tak du*** *dy time.* (Jamieson 1998)
   Take you your time.
3. *O peerie bairn,* ***sleep du*** (Black 1992)
   O little child, sleep you

In this paper I will present data from acceptability judgments given by Shetland dialect speakers which show that, presently, speakers over 30 accept both the traditional verb-subject order and the standard English subject-verb order in imperative constructions with second person pronominal subjects. However, there appears to be a trend towards loss, with speakers aged 18-30 only permitting this word order variation to the same extent when the verb is intransitive. Using this data, I will explore how change propagates at different rates through a lexicon based on syntactic features, applying a feature-based approach (e.g. Adger and Smith 2010) in tandem with Yang's variational model of language change (2000) to particularly examine the role of transitivity in syntactic variation and change.

Importantly, this change in imperatives in Shetland dialect is not an isolated development. Interrogatives can similarly permit this type of verb movement to some extent, and the data I will present shows that the loss of this movement has progressed at a faster rate than that of imperatives. Using the above models I will examine similarities in the behaviour of these constructions, along with the parallels that can be drawn to the developments of questions and imperatives that took place diachronically in English – despite different patterns of language contact and time spans. This has broader implications for how we understand imperative clause structure and its relationship to other types of clause structure.

Effects of topic on children's interpretations of control

Vikki Janke (University of Kent)

In this study, the effect of topic was tested on typically developing children's interpretations of four examples of control: complement control (1), adjunct control (2), controlled verbal-gerund subjects (3) and long-distance control (4).

(1) Ron persuaded Hermione [*ec* to kick the ball].
(2) Harry tapped Luna [while *ec* feeding the owl].
(3) [*ec* Pouring the water quickly] made Luna wet.
(4) Harry said to Luna that [*ec* flying the broom upside down was a great trick].

(1) is an uncontroversial example of obligatory control (OC), and (3) and (4) of non-obligatory control (NOC) (Williams 1980; Petter 1998; Landau 2000; Hornstein 2001). The status of (2) is less certain. In adjunct control the non-finite clause is not selected by the control verb, suggesting it is NOC. Yet adjunct control is widely reported as obligatorily subject-oriented (see Landau 2013), and like OC, it permits inanimate controllers but disallows arbitrary and sentence-external interpretations. The bulk of the acquisition literature that has tracked children's development of this construction does so on the assumption that the adult reading is subject-oriented and that any deviation from this is indicative of an interim developmental milestone on the child's path to an adult grammar (see Guasti 2002 for a review). The results of the current study suggest a revision for this view of adjunct control.

62 children between the ages of 8 and 11 were administered three two-choice picture selection tasks. The first established the children's base-line preferred interpretations of (1) to (4). The second task primed the sentences with a weakly established topic (5), and the third with a strongly established topic (6).

(5) Let me tell you something about Harry. Harry said to Luna that [*ec* flying the broom upside down was a great trick].
(6) Harry is testing his flying skills. Harry takes off in the air. Harry said to Luna that [*ec* flying the broom upside down was a great trick].

Comparisons focused on the degree to which children's initial preferences altered as function of the primes. Results indicate that use of contextual cues in complement control shows a very different pattern to that of adjunct control. Most children's referent choices remain unaffected by the primes in complement control, but they are affected by both weakly and strongly established topics in adjunct control, although the effect is larger with a strongly established topic. Interestingly, the older they are, the more they are affected by contextual cues in adjunct control, whereas for complement control, the reverse is true. For controlled verbal gerunds, both strengths of topic affect referent choice in all children, as expected of an NOC construction. The pattern for long-distance control is rather different: the weakly established topic has little effect on interpretation at any age, whereas the effect of the strongly established topic increases with age. A scale of influence is proposed for factors influencing NOC interpretations (Ariel 1998; 2000). The results for adjunct control are compared to similar findings on adults (Janke and Bailey submitted), which are novel in revealing a much stronger susceptibility to pragmatic interference for adjunct control than generally reported. A structural account for adjunct control is proposed (Janke and Neeleman 2012), which permits the evident interpretation shift whilst still excluding arbitrary and sentence-external interpretations.

On the (non-)subjecthood of dative experiencers in Polish and Spanish

Angel Luis Jiménez-Fernández (University of Seville) & Bożena Rozwadowska (University of Wrocław)

Goal: In view of the controversy regarding the status of Dative arguments, we investigate the syntactic and discourse properties of an important subgroup of Dative arguments, i.e., Dative Experiencers (DEs), which in Polish and Spanish, in contrast to English, are clearly marked and distinguished from Accusative complements, as shown in (1).

(1) a. A Ángela le gusta ese vestido. (Sp)
b. Angeli podoba się ta sukienka (Pl)
c. That dress pleases Angela / Angela is pleased by that dress. (Eng)

Background: For Spanish, Masullo (1992) makes a contrast between Spanish preverbal datives and true CLLD-ed (Clitic Left Dislocated) topics and concludes that DEs are subjects. Fernández-Soriano (1999a,b) establishes a parallelism between DEs and true nominative subjects and draws the conclusion that DEs are subjects. One of the DE subject properties that Fernández-Soriano highlights is that, as opposed to other types of Datives (Indirect Objects), DEs are used preverbally in out-of-the-blue sentences, which suggests that this is the basic/unmarked order. By contrast, Tubino (2009) claims "that the concept of 'subject' needs to be revised in Spanish and that Spanish Datives should not be compared with Icelandic quirky subjects." She claims that they can be topicalised in the left periphery of the clause. For Polish, Wiland (2013) suggests that objects in OVS sentences move to the left periphery, but this is not applied to DEs. Żychliński (2013) re-assesses Bondaruk and Szymanek's (2007) claims for the subject status of DEs in Polish, and concludes that they are not subjects.

Proposal and analysis: In light of the above controversy, it is worth reassessing the status of DEs from the perspective of Information Structure in Spanish and Polish, as compared to English. To do so, we have conducted a data elicitation experiment in the three languages, whose results indicate that they differ in their word order properties. Since in Polish, as in English but in contrast to Spanish, in out of the blue sentences both OVS and SVO orders are possible, we account for the differences in terms of the classification into discourse prominent and agreement prominent languages and argue that spec-TP position can be used for various purposes. Our proposal, substantiated by the analysis presented in the paper, is that originally DEs are generated in a position higher than the Stimulus argument of this type of psych verbs (in line with Harley 1995). However, DEs can move to a higher position (spec-TP or spec-CP) for different reasons: (i) to simply value φ-features in T or (ii) to further value some discourse feature in T or C, depending on the language (Miyagawa 2010, Jiménez-Fernández 2010 and Jiménez-Fernández and Miyagawa 2014). Our claim within the parametric variation approach is that in English and Polish Experiencers move to TP if they are not discourse-wise marked; otherwise, they move to CP. Spanish may move Experiencers (including DEs) to TP for both reasons (agreement and discourse), explaining their subject-like properties. In English Experiencers are real subjects, so they move via agreement to spec-TP, but also they can be moved to Spec-CP if they are topics. In Spanish DEs move to spec-TP regardless of whether they are part of an all-focus sentence or they have a special discourse function (topic). In the latter case, topic features are lowered from C to T. For Polish we propose that discourse features are retained at C, the phasal head, triggering movement of a topic DE to CP. In those cases where DE is focus and the Stimulus S is preverbal we entertain that the S moves to CP; in all-focus sentences Polish C has a non-interpretable [Top] feature which makes speakers always select a constituent as the sentence topic. This analysis, according to which DEs are not true subjects in Polish or Spanish is substantiated by further evidence, such as raising, the distribution of resumptive pronouns and the binding contrast with the possessive anaphor *swój/a/e* 'self', which is considered to be a subject oriented anaphor in Polish, and the distribution of anaphoric pronouns in Spanish (*A Ángela$_i$ le gusta su$_i$ casa* vs. ?*Su$_i$ casa le gusta a Ángela$_i$* 'Angela likes her own house').

Irish genitive possessors- The 'pseudo-construct state'

Frances Kane, Rafaella Folli & Chrsistina Sevdali (University of Ulster)

Previous analyses of Irish noun phrases have focused on genitive noun phrases (GNPs) that typically consist of a head noun governing a genitive noun (1). Crucially, the head noun cannot be introduced by the definite article (2), even though Irish has definite determiners in canonical environments:

(1) Hata an fhir
hat the man-GEN
'The man's hat'

(2) *An hata an fhir
the hat the man-GEN

The disallowance of the article in (2) resembles the Construct State Nominal of Semitic languages for which N-to-D movement has been proposed (Ritter 1988 and Borer 1988, 1999a a.o.). This approach has been extended to account for the facts of Irish above (Guilfoyle 1988; Duffield 1995 a.o.). However this approach cannot be correct. First, Semitic CSNs and Irish GNPs differ on a number of properties beyond the ban on the article and word order. Where the two differ includes head modification, ±DEF spreading between the two components and compound formation. Second, adjectives in Irish are adjacent to N which is problematic for a simple head movement (see also Willis 2006 a.o.):

(3) **Teach aláinn** an mhúinteora
house beautiful *the teacher-GEN*
'The teacher's beautiful house'

Third we present new data (4) that show that N has not moved to D: when the genitive non-head is attributive, the definite article freely appears and when N is modified by a demonstrative, the article is obligatory (5) showing that N-to-D is not the correct analysis for the Irish paradigm:

(4) **An** hata **sin** an fhir
the *hat* ***DEM*** *the man-GEN*
'that hat (of the man)'

(5) Leis **an** gcaptaen na loinge
with ***the*** *captain the ship-GEN*
'With the captain of the ship'

Instead, we propose that the components of a GNP are generated within a relational phrase (following Adger 2012). The type of relation generated is mediated by a particular root type. For example the root √POSS projects a syntactic category קּ within which the possessive relation in (6) is generated:

(6) λyλx.poss(x,y)

Both the head and the non-head are generated inside קּ. The appearance of the article in Irish is dependent on the type of relation generated within קּ. When קּ is possessive ($קּ_{poss}$) the phrase containing the possessor moves to SpecDP and licenses D, whereas when קּ is attributive ($קּ_{att}$), the attributive (non-referential) phrase remains in-situ, allowing the definite article.

The paper provides a novel and unified analysis for Irish GNPs We also contribute to understanding of how reference is established in the Irish DP and in doing so provide an explanation of the obligatory co-occurrence of the post-nominal demonstrative and the article in Irish.

Neutral change is a characteristic property of clusterized language communities

Henri Kauhanen (University of Manchester)

A commonly held view is that language change is *non-neutral*: changes are thought to be motivated by articulatory or perceptual biases (Ohala 1989, Pierrehumbert 2001), by computational economy principles or (third-factor) processing constraints (Lightfoot 1979, Roberts & Roussou 2003), by sociolinguistic biases such as prestige (Labov 1972), or by functional (even teleological) considerations of the 'purposes' of the change vis-à-vis the overall linguistic system (Jakobson 1961, Itkonen 1981, Anttila 1989, Vennemann 1993). Languages do not change 'at random' or for no reason at all. Recent computational studies of language change have likewise argued that a neutral mechanism cannot give rise to 'well-behaved' time series of change which would align with historical data, for instance to generate S-curves (Ke et al. 2008, Fagyal et al. 2010, Blythe & Croft 2012). *Prima facie*, this would appear to imply that the prospects of a neutral theory of language change (cf. the neutral theory of molecular evolution in Kimura 1994, or the neutral theory of biodiversity in Hubbell 2001) are rather murky.

In this paper, I will however defend the neutral theory, suggesting that it can be made to work for certain cases of change. Rather than proceeding from an analytical critique of non-neutral theory (which has been given before; e.g. Lass 1980, 1997), I will proffer positive evidence in favour of the theory by defining a neutral model of language change and by showing that, *pace* Blythe & Croft (2012) and others, this model does generate 'well-behaved' time series under suitable values of model parameters. This discrepancy in the results of previous modelling work and the present work is explained by the different idealizing assumptions that go into model definition: whereas previous models have always assumed static networks of immortal speakers, in the present model the social network that represents the language community is scrambled by a graph-rewiring algorithm that accounts for speaker additions and removals (e.g. birth and death) as well as changes to inter-individual links (e.g. updates to friendship ties). The actuation of individual changes in this model is given by random, undirected 'mutation' events in individual speakers, and subsequent replication is entirely frequency-dependent, as in any neutral model.

To demonstrate that 'well-behaved' change is a characteristic property of this model, and not a mere statistical anomaly observed in a handful of simulation runs, I propose three general criteria for the well-behavedness of linguistic change and quantify them mathematically, so that each can be calculated over an entire batch of simulation runs of the model. These quantities measure (i) the tendency of the language community to reach and maintain an equilibrium where a single value of a linguistic variable dominates, (ii) the ability of the community to shift from one stable state to another, and (iii) the 'smoothness', or monotonicity, of such shifts. With this method, and a number of simulation runs and sweeps across different values of the model's parameters, I show (i) that neutral change is well-behaved if the social network is *clusterized*, so that there is a central hub of very well connected speakers and a periphery of loosely connected speakers; (ii) that this result is independent of the number of possible values of the linguistic variable in question; and (iii) that well-behaved neutral change is lost if the rewiring dynamics is removed from the model and a static network of speakers is considered instead.

These results call into question the earlier claim that a neutral mechanism cannot give rise to well-behaved change, and also highlight the impact that idealizing assumptions have in all mathematical modelling. Modelling language communities as dynamic, evolving (rather than static) networks of speakers seems particularly important, as it is empirically uncontested that human social networks are not static. In fact, I offer an interpretation of the present model in terms of Milroy and Milroy's (1985) theory of weak and strong ties, arguing that the clusterized communities in this model can be equated with the 'closeknit' communities discussed by the Milroys. The positive contribution of the neutral model is that it obviates the need to rely on prestige (which, it can be argued, has a murky epistemological foundation) as the 'actuator' of change. Based on these simulation results, it appears that in closeknit communities change (and actuation) can be neutral, so that biasing factors such as prestige are not needed as *explanantia*.

Scope ambiguity and Broca's aphasia: Evidence for a grammar-specific impairment?

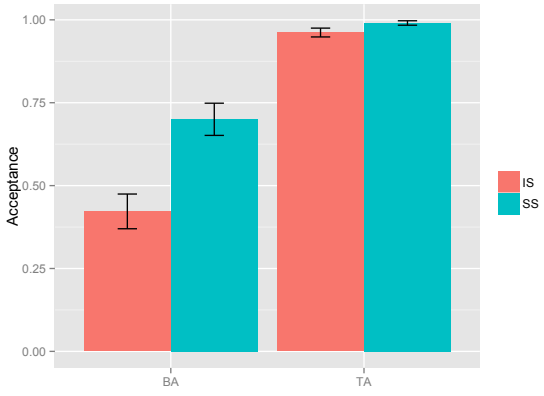
Lynda Kennedy (University of Ulster), Jacopo Romoli (University of Ulster), Lyn Tieu (École Normale Supérieure) & Raffaella Folli (University of Ulster)

Summary: The current study provides novel evidence concerning the interpretation of scope ambiguity in Broca's aphasia. We tested a group of individuals diagnosed with Broca's aphasia (BAs) on scopally ambiguous sentences involving *every* and negation and compared their performance with that of a group of typical adults (TAs). Our main result was that BAs, unlike TAs, performed *significantly worse* on the IS and SS conditions. Crucially, these conditions differed only in that the IS reading involved an extra grammatical operation (e.g. reconstruction). This result indicates that the observed grammatical impairment in BA extends to operations at the syntax-semantics interface, and appears more consistent with accounts assuming a specific impairment to grammatical operations in BA (e.g. Grodzinsky 2000, 2006; Friedmann and Shapiro 2003).

Background: It is a well-known observation that BAs exhibit impaired comprehension performance on constructions involving specific grammatical operations. Most research to date has focused on the assignment of theta roles in sentences derived by movement (cf. Grodzinsky 2000; Grillo 2005) however little is known about how these individuals perform with respect to *covert movement* operations such as those involved in deriving different scope readings (but see Saddy 1995 and Varkanitsa et al. 2012). Crucially, scope ambiguity phenomena provide us with a unique opportunity to test the status of the grammar in BA as the relevant grammatical operations are not intimately related to the assignment of theta roles or changes in surface word order. They involve a single surface structure that can be associated with more than one meaning, with the only difference being that one interpretation (the IS reading) involves an additional grammatical operation (e.g. Neelman and Van de Koot 2009, Reinhart 2006).

Experiment: We tested 9 BAs and 16 TAs, and compared their performance on ambiguous sentences, such as *Every elephant didn't collect coconuts*. Using a TVJT (Crain and Thornton 1998), participants were tested in two conditions: (i) contexts only consistent with an IS interpretation (IS condition) and (ii) contexts that were also consistent with the SS interpretation (SS condition). We precisely controlled the discourse context by using the same explicit Question Under Discussion (QUD) which could be answered by both readings of the target sentences (e.g. *Did every elephant collect coconuts?*).

Results & Discussion: A 2x2 mixed-effect logistic regression model with *group* (BAs vs. TAs) and *condition* (IS vs. SS) as factors revealed a main effect of group ($p<.001$), a main effect of condition ($p<.001$), and no significant interaction ($p=0.56$). Simple effects analysis, however, revealed a significant difference between the IS and SS conditions for the BA group but no difference for the TAs. In sum, this result indicates the BAs had specific difficulty with the IS condition. Given that the latter differs from the SS condition only with regards to the grammatical operations involved, this result, on the face of it, appears to be more consistent with accounts which assume that BA involves a specific impairment in grammatical (syntactic or semantic) operations (e.g. Friedmann and Shapiro 2003, Grodzinsky 2006) than those proposing a pure-processing based account (e.g. Avrutin 2006).



Tough-constructions, reconstruction and agreement in Swedish

Eva Klingvall (Lund University)

This talk discusses the longstanding issue of how to account for the derivation of *tough*-constructions (TC), focusing on Swedish. In TCs, the subject is interpreted as the thematic object of the embedded verb.

(1) This sentence is easy for anyone to parse {*this sentence*}.

Analyses of TCs have generally argued either that the subject has moved from the embedded object position (e.g. Rosenbaum, 1967; Postal, 1971; Brody 1993; Hornstein 2001, Hicks 2009) or that it is base-generated in the subject position but is linked to the embedded object position in some other way (e.g. Chomsky, 1977; Browning, 1989; Rezac, 2006). Movement analyses predict that the subject should be able to contain a bound reflexive pronoun and that the subject should be able to reconstruct below a *for*-phrase (see e.g. Fleisher, 2013). Base-generation analyses, on the other hand, predict that neither of these should be possible.

In Swedish, some types of TC allow for reconstruction, (2b) while others do not, (2a).

(2) a. Få personer går lätt för Johan att prata med.
few people go easily for Johan to talk to
'Few people are easy for Johan to talk to.'
few > *easy*, *easy* > *few*

b. Få personer är lätta för Johan att prata med.
few people are easy for Johan to talk to
'Few people are easy for Johan to talk to.'
few > *easy*, **easy* > *few*

As the ability to get narrow scope is an indication of movement, and lack thereof indicates absence of movement, the Swedish data seem to suggest that the different types of TC are derived in different ways. I am going to argue that this is not the case but that all TCs in Swedish can be captured by a movement analysis (contra Engdahl, 2012). Such an analysis is motivated by the fact that all TC types can have a bound reflexive in the subject. As for the absence of reconstruction in some TC types, I argue that it is tied to a particular property of those TCs that do not allow for it, namely a morphological agreement suffix on the adjective. As I show with data from passives, agreement of this kind systematically leads to 'freezing' and thus blocks reconstruction in Swedish (for other cases where agreement correlates with lack of reconstruction, see Boeckx 2001 and Sauerland and Elbourne 2002). Interestingly, freezing arises in the case of common gender and plural marking but not neuter marking. These agreement properties are not discussed in the literature. I argue that morphological agreement in the relevant sense reflects a syntactic agree relation, otherwise absent. More specifically, common and plural marking on the adjective are the non-default cases resulting from syntactic agreement, whereas neuter marking is default and does not require agreement (contra Josefsson, 2006). If the correlation between syntactic agreement and lack of reconstruction that I propose for Swedish is correct, all types of TC in Swedish can be captured by the movement analysis in Hicks (2009).

The island status of Swedish relative clauses: evidence from processing

Eva Klingvall (Lund University), Fredrik Heinat (Linnaeus University), Damon Tutunjian (Lund University), & Anna-Lena Wiklund (Lund University)

Extraction from relative clauses typically yields unacceptable sentences across the majority of languages. Noun phrases involving relative clauses are therefore assumed to universally comprise syntactic "islands" for extraction. The fact that (1) is judged as acceptable in Swedish is thus unexpected and poses a problem for both syntactic accounts (e.g., Sprouse et al. 2012) and processing accounts (e.g., Hofmeister and Sag 2010) of island effects. Our study uses an eyetracking while reading paradigm to determine whether extractions from restrictive relative clauses (RCE) (1), which purportedly are not syntactic islands in Swedish, elicit similar processing costs as extractions from non-restrictive relative clauses (nRCE) (2), which are known to be strong islands in Swedish (Engdahl, 1997), or if RCEs pattern closer to sentences in which an extraction has been made from a *that*-clause (TCE) (3). The eighty test sentences were graded for pragmatic well-formedness on a seven grade scale. In addition, we investigated if the participants' variance in individual working memory spans had any effect on the processing of the sentences. Working memory span was measured via two working memory span tasks (Ospan and Reverse Digit Span).

(1) Såna gamla bilar såg jag en man som alltid tvättade på gatan... (RCE)
such old cars saw I a man that always washed in the street

(2) Såna gamla bilar såg jag en man som förresten tvättade på gatan... (nRCE)
such old cars saw I a man that by-the-way washed in the street

(3) Såna gamla bilar såg jag att en man alltid tvättade på gatan... (TCE)
such old cars saw I that a man always washed in the street

We used linear mixed models to analyse four eyetracking measures (first fixation duration, gaze duration, regression path duration, and total dwell time) across two regions (embedded verb: *tvättade*; PP: *på bensinmacken*).

Our findings suggest that the three structures are processed differently. RCEs and TCEs show signs of integration whereas nRCEs do not. For RCEs and TCEs the presumed integration of the filler at the verb is sensitive to variance in individual working memory spans and pragmatic norm, though these effects emerge at different points in the sentence. For TCEs, these effects show up at the embedded verb, whereas for RCEs, they show up later, at the PP region. For nRCEs the measures are not conditioned by working memory span or pragmatic norm.

One possible explanation for these results is that RCEs are more difficult to parse than TCEs and what we see on the PP is delayed processing of the integration. For nRCEs, it is clear that integration does not take place in the same way as in the other conditions. Whether this is a sign of strong islandhood or not, is a question for future research.

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Intonational cues for subjects and topics in Bantu

Nancy C. Kula (University of Essex)

The analysis of pre-verbal NPs in Bantu languages as subjects, syntactic topics or discourse topics has been subject to much debate. The question is related to the pervasive morphological subject agreement and pro-drop qualities in Bantu, as well as to word-order. This paper tackles this issue from a prosodic perspective aiming to evaluate whether intonation distinguishes subjects from topics. If subjects are topics then their intonational structure should not differ from other topics. The paper compares the intonational structure of subjects and fronted object and clausal topics in this respect. The study is conducted with respect to Bemba (Bantu, M42) with intonation annotation adapted from the ToBI system developed in Pierrehumbert & Beckman (1988) and Beckman et al. (2005).

Subjects in declaratives show a consistent right edge boundary L%. The boundary tone does not replace a lexical final high tone on the subject noun, but causes it to be realized at a lower register. An optional pause after the subject is possible. We see this same pattern for a fronted clausal topic with the following main clause showing pitch contraction. By contrast, a fronted non-clausal object shows a continuation boundary H% which is superimposed onto the low tone of the final syllable of the fronted object. An optional pause follows the fronted object but in this case there is no contraction of the following clause after pitch reset. This paper hypothesizes that the explanation for the different marking of non-clausal fronted object topics vs. clausal topics and subjects follows from discourse information, in particular a requirement to more clearly disambiguate the non-clausal object topic from a subject so as to signal the following non-agreeing verb. Other cases where a right-edge boundary H% is present involves relative and complementizer clauses where it can also be argued that the main information content of the utterance is still to follow. Fronted headless relatives also show the same pattern. This discourse patterning does not hold for clausal topics whose information content provides the main import of the utterance at last in the cases tested.

Contrastive topics by comparison show pitch register raising which is attributed to the presence of a left edge -H tone with the right edge of the topic indicated by a boundary L% just as in subjects. In general topics (including subjects) contrast with right dislocated constituents which show pitch contraction indicated by a left-edge -L tone.

Earlier work (Downing 2011; Zerbian 2006) argues that languages vary in being either symmetric or asymmetric with respect to the prosodic phrasing of right and left dislocated topics. Bemba is symmetrical in having both kinds of topics phonologically phrased separately from the main clause. It will be argued here that topics form intermediate intonational phrases which then form an intonational phrase with the following i-phrase of the matrix clause. In this sense i-phrases are the only prosodic constituents that are referenced by boundary tones in Bemba.

This paper thus argues that the boundary tones or intonational cues that preverbal topics and subjects show differ depending on the discourse function of the topic and thus support the different categorization of topics as argued in Frascarelli & Hinterhölzl (2007); Morimoto (2000), for example. A secondary contribution is that the paper provides an understanding of the mapping of intonational tone onto lexical tones providing an illustration of which aspects of an intonational grammar are relevant to a tone language. Here right edge boundary tones {L%, H%} and phrasal tones targeting left edges of intonational phrases {-L, -H} are shown to be significant.

Who needs it? Variation in experiencer marking in Estonian 'need'-constructions

Liina Lindström (University of Tartu) & Virve Vihman (University of Manchester)

Experiencer argument expression varies greatly between languages and across constructions (e.g. Bickel 2004; Bossong 1998). This talk focusses on language-internal variation in expression of the experiencer argument in two related constructions expressing need in Estonian, with nominal (1) or infinitival (2) complements.

1.	mu-l / mu-lle	**on**	**vaja**	uut	eesmärki
	I-ADE / I-ALL	be.3SG.PRS	need	new.PRT	goal.PRT
	I need a new goal.				
2.	mu-l	**on**	**vaja**	reisi-le	minna
	I-ADE	be.3SG.PRS	need	trip-ALL	go.INF
	I need to go on a trip.				

Narrog finds a typological association of necessitive with non-canonical marking (2010: 82). Functions often served by the dative case are shared by the adessive and allative in Estonian; in the 'need' constructions, the experiencer varies between the two. In addition, though null reference is rare with obliques (Siewierksa 2003), these oblique arguments are frequently omitted. Variation in experiencer marking is often connected to predicate semantics (Croft 1993), but the variation considered here has not previously been explained semantically.

We conducted a corpus study to investigate semantic, syntactic and pragmatic factors motivating the choice between three options for these modal experiencers – adessive, allative and zero. We coded 605 'need' clauses, drawn from both spoken and written corpora, according to a number of potentially relevant predictors, and analysed the results to reveal which predictors affect the choice between (1) overt and zero expression of the experiencer and (2) adessive and allative marking of the overt experiencer. Two non-parametric classification methods were used: recursive partitioning tree models and random forests.

Our results show that omission of the experiencer is connected to clausal semantics, namely whether the need is seen as expressing participant-internal or participant-external modality (van der Auwera & Plungian 1998). Among overt arguments, however, the choice of case is affected by person, complement type and accessibility of the referent. This has implications for predicate classification and the typology of oblique arguments and case variation.

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One of those things that's obvious once you see it: On an English agreement mismatch

Christopher Lucas (SOAS)

This paper examines a rarely discussed agreement mismatch construction in English restrictive relative clauses (RCs) as in (1), where the verb in the RC displays singular agreement although its subject is a gap apparently controlled by a plural antecedent.

(1) It had been one of those suggestions that stuns everyone with its rightness. (ALH 873)

The construction consists of indefinite pronoun *one*, then *of*, then either *the* or determinative *these* or *those*, then an NP with a plural head noun modified by an RC whose subject gap fails to trigger plural agreement on the verb: *one of* $_{DEF.DET}$ NP_{PL} $_{REL}$ V_{SG}, a word order which precludes an explanation of the agreement mismatch in terms of 'attraction'. Singular rather than plural agreement in this construction never seems to be obligatory, but there are various factors which make singular agreement ungrammatical or strongly dispreferred, including, for example, an emphasis on the numerosity of the set denoted by the plural NP (2), or the insertion of any noun rendering *one* a determiner rather than a pronoun (3).

(2) ?This is one of the many books that addresses the snobbery of the English (cf. A05 857)
(3) ?One example of the inadequacies that arises in this case… (cf. HH2 1033)

My key descriptive claim is that a necessary (but not sufficient) condition for singular agreement is that there be a salient interpretation of the plural NP on which its referents are not (uniquely) identifiable to the addressee, despite the definiteness marking. In the majority of cases, including the example in (1), this is because the RC is what Hawkins (1978) calls 'referent-establishing', where the existence of the referent of the NP is not part of the common ground immediately prior to utterance. As argued by Lucas (2011), NPs of this type necessarily involve failure of the existence presupposition carried by definiteness marking, and can therefore only be interpreted if the addressee accommodates. This descriptive claim is borne out by data drawn from the British National Corpus (BNC). In a sample of 343 NPs of the relevant type, 195 tokens (57%) had plural agreement in the RC and 147 (43%) had singular. Among those with singular agreement there was just one token (4) where no accommodation-requiring interpretation was possible (because in context the definite NP is clearly anaphoric). In my idiolect, this is ungrammatical.

(4) [He] wondered whether she had been one of the girls who was sweet on Jos. (ACV 762)

I propose that singular agreement of the kind in (1) has grammaticalized as an expression of indefinite singular determination of the head-noun predicate, similarly to French *des gens* 'some people' < 'of the people' and Arabic *baʿḍu n-nās* 'some people (/ one person)' < 'some (/one) of the people'. If *one of* $_{DEF.DET}$ NP_{PL} can, despite appearances, function as a singular indefinite, this allows a simple explanation for why the verb in the RC can show singular concord. In addition, the (near-total) restriction of singular concord to NPs where the existence/uniqueness presupposition fails makes sense: such NPs are arguably definite in form only, so it is natural that only these would grammaticalize as actual indefinites. Finally, exactly this construction occurs in some other languages (e.g. German, French, Italian, Maltese) but not all (e.g. Arabic dialects), suggesting this is a European areal development rather than an emergent property of universal synchronic syntactic or semantic principles.

References: Hawkins, John A. 1978. *Definiteness and indefiniteness: A study in reference and grammaticality prediction*. London: Croom Helm.

Lucas, Christopher. 2011. Definiteness, procedural encoding and the limits of accommodation. In Victoria Escandell-Vidal, Manuel Leonetti & Aoife Ahern (eds.), *Procedural Meaning: Problems and Perspectives*, 157–82. Bingley, UK: Emerald Publishing.

The purpose of this paper is to investigate the syntactic properties of 'prepositional numeral constructions' (Cover & Zwarts 2006; henceforth PNC), exemplified in (1), within the framework of Head-driven Phrase Structure Grammar (HPSG; Pollard & Sag 1994).

(1) **around/about/over/under/in excess of** *ninety* students

First, (2) shows that PNCs are NPs because they can take a determiner.

(2) *the* over 160 lenders (BYU-BNC)

Second, the examples in (3) illustrate that when the PNC is a subject, the number agreement with the verb depends on the number of the right-most noun. This shows that this noun is the head of PNCs.

(3) a. [Over one *year*] has/*have passed. b. [Over three *years*] have/*has passed.

Third, the pre-numeral element in PNCs is a preposition, although it might appear to be an adverb: e.g. ***around/about*** *ninety students* has more or less the same meaning as ***approxomately/roughly*** *ninety students* (Corver & Zwarts 2006). The pre-numeral element behaves like a normal spatial preposition in that it can be modified by *somewhere*. Adverbs *approximately* and *roughly* do not allow such modification.

(4) a. (...) he lived **somewhere** *around* the block. (COCA)
b. We've bought (**somewhere**) *around* fifteen books. (Kayne 2010:48)
c. *__somewhere__ *approximately/roughly* 20 children

These three points indicate that a PNC has the following structure (Aarts 2011:119).

(5) $[_{NP}\ [_{PP}$ over three$][_{N}$ years $]]$

It is clear, then, that a prepositional numeral (*over three* in (5)) is a peculiar sort of PP: unlike a normal PP, it is in the prenominal position. Note also that only a limited variety of preposition can participate in this construction. Compare (1) with ****round/*above/ *below*** *ninety students*. A satisfactory account of PNCs should be able to accommodate these peculiarities.

Corver & Zwarts (2006) propose that the N and the prepositional numeral are merged inside the NP and make a small clause. The prepositional numeral then moves up to Spec NumP for checking its cardinality feature with the Num head. The question arises as to how it is ensured that only a limited variety of PP can move to the prenominal position (Spec NumP).

I propose that the prepositions which can occur in PNCs have something like the following partial lexical description.

(6)
$$\begin{bmatrix} \textsc{head} & \textit{preposition} \\ \textsc{comps} & \langle \begin{bmatrix} \textsc{head} & \textit{cardinal} \\ \textsc{sel} & \langle \boxed{1} \rangle \end{bmatrix} \rangle \\ \textsc{sel} & \langle \boxed{1} \rangle \end{bmatrix}$$

(6) specifies the following three properties of a pre-numeral element in PNCs: (i) it is a preposition; (ii) it takes a cardinal numeral as its complement; and it selects whatever the complement selects. The prepositions of this type are different from normal types of prepositions in that they select only cardinal numerals and that they inherit the selectional properties of the complement. It will be argued that this characterisation can capture all the properties of PNCs discussed above.

The role of iconicity in lexical retrieval in British Sign Language

Chloe Marshall (UCL Institute of Education) & Joanna Atkinson (UCL Deafness Cognition and Language Research Centre)

A striking feature of language is that form-meaning mappings are arbitrary. There is nothing cat-like, for example, in the sequence of sounds /kæt/. Recently, linguists who study non-European languages and sign languages have challenged this view, claiming that non-arbitrary and iconic form-meaning mappings are common across the world's languages. For example, the sign for CAT in British Sign Language (BSL) involves the fingers tracing cats' whiskers at the cheek. Although many signs have arbitrary form-meaning mappings, iconicity is pervasive in sign languages. In an earlier study[1] we asked deaf native signers to undertake a fluency task, whereby they had to produce as many different signs as they could in a minute that belonged to particular phonological categories, for example, that were located above the shoulders or that contained a particular handshape. We compared our results to analogous fluency tasks from spoken language, whereby speakers were asked to produce words that began with a particular sound or letter, e.g. 'f' or 's'. We found that the number of items produced differed in BSL compared to spoken languages (higher than expected for 'above the shoulders', lower than expected for the 'claw 5'  and '1'  handshapes), and we hypothesise that iconicity either helps or hinders sign production, depending on the phonological category.

The study that we present here tests this hypothesis with three phonological categories from the BSL fluency task: 'above the shoulders', 'claw 5' and '1'. 'Above the shoulders' offers, we hypothesise, the opportunity to exploit iconicity because many signs have a direct mapping to the precise location of the referent, e.g., HEARING AID (ear), LIPSTICK (lips) and THINK (forehead). Although there are signs at these different locations where the location is *not* iconic, e.g. NAME (forehead) and AFTERNOON (chin), if signers adopt a strategy of searching for signs that are iconically linked to location, they might be successful in generating a large number of signs. The 'claw 5' handshape is iconic in many signs, but, in contrast to 'above the shoulders', has several iconic meanings. For example, it is used as a classifying element, e.g. 'bent legs' in SPIDER and the claws in LION, or to indicate the extent of large spheroid objects such as AUBERGINE. Alternatively, the fingertips can be used to represent many small dots, as in FRECKLES. We hypothesise that this multiplicity of iconic correspondences might actually slow down retrieval because signers might fixate on just one iconic function of the hand, and ignore other iconic functions and non-iconic signs. The '1' handshape similarly has several different iconic meanings (and is also used in many non-iconic signs).

We asked 20 deaf native signers to rate the iconicity, on a scale of 1 (low iconicity) to7 (high iconicity), of all the signs produced to the 'above the shoulders', 'claw 5' and '1' categories in Marshall et al.'s (2014) data. As predicted, signs produced to the "above the shoulders" category did indeed have the highest iconicity ratings, and signs for this category had particularly high iconicity ratings for their location. Furthermore, there was rich clustering within items produced to this category, with signs being produced in clusters of signs that shared a more specific location, e.g. ear, forehead, cheek or chin. Iconicity for location therefore appears to facilitate the retrieval of items to the category 'above the shoulders'. In contrast, signs produced to the two handshape categories, 'claw 5' and '1', had lower mean iconicity. Furthermore, we found clustering of responses around particular iconic uses of the handshape, and long pauses between those clusters which indicated a slowing down of retrieval. We therefore conclude that iconicity is a factor that affects lexical retrieval in BSL.

[1] Marshall, C. R., Rowley, K., & Atkinson, J. (2014). Modality-dependent and -independent factors in the organization of the signed language lexicon: Insights from semantic and phonological fluency tasks in BSL. *Journal of Psycholinguistic Research, 43*, 587-610.

Approximative number in the Spanish determiner system

Luisa Martí (Queen Mary, University of London)

There is extensive work on the scopal and epistemic properties of Spanish *algún*, *algunos*, and bare plurals (Alonso-Ovalle and Menéndez-Benito 2010, López Palma 2007, Martí 2007, 2008, a.o.). A previously unnoticed property of these indefinites is as follows:

(1) Hay alguna mosca/algunas moscas/moscas en la sopa
there.is/are ALGÚN.FEM fly/ALGUNOS.FEM flies/flies in the soup
'There is/are some fly/some flies/flies in my soup' (translations approximate)

With *algún*, there can be 1+ flies in the soup, but not many. With *algunos*, there have to be a plurality of flies, there can't be many, and there are more flies than before. With the bare plural, there has to be a plurality of flies, without other requirements on their number.

Adapting Harbour's (2014) theory of number in the N domain to the D domain, I propose that *algún* is a paucal D (≈ a few): it takes a join-complete semilattice and returns a join-incomplete proper subsection of it where the cut is low but vague. A lattice is join-complete iff whenever 2 elements of the lattice are joined, they yield a 3rd element that is also in the lattice. Thus, *algún* is appropriate if there is 1, 2, 3, perhaps 4 N that VP, but not more. *Algunos* is a greater paucal D (≈ several): it takes an atomless, join-complete upper subsection of a lattice and retuns a join-incomplete proper subsection of it. The cut for the greater paucal is also vague. Thus, *algunos* is appropriate if there are 4, 5, perhaps 6 N that VP. The plural ending of the bare plural noun operates on a lattice and returns an atomless, join-complete proper subsection. Thus, 2+ N that VP makes the sentence with the bare plural true. The plural is closed under addition, the approximatives are not. Harbour's semantics for [±add(itive)] is in (2) and (3) ('x⊔y' is the join of x and y; 'Q⊏P' says that Q is a proper subpart of P; Q is a contextually supplied free variable); *algún* and *algunos* are in (4) and (5):

(2) $[[+add]] = \lambda P \lambda x: Q(x) \,\&\, Q \sqsubset P.\ \forall y\ (Q(y) \rightarrow Q(x \sqcup y))$

(3) $[[-add]] = \lambda P \lambda x: Q(x) \,\&\, Q \sqsubset P.\ \neg\forall y\ (Q(y) \rightarrow Q(x \sqcup y))$

(4) $[[algún]] = \lambda R_{et}.\lambda S_{et}.\exists z\ ([[-add]](R))z \,\&\, S(z)$

(5) $[[algunos]] = \lambda R_{et}.\lambda S_{et}.\exists z\ ([[-add]](([[+add]](R)))z \,\&\, S(z)$

(+add(−add(P))) is unsatisfiable (cannot obtain a join-complete lattice from a join-incomplete one), but (−add(+add(P))) is, on the other hand, satisfiable. *Alg*- contributes [−add] and -$s_{algunos}$, [+add]. Evidence that -s_{algunos} is contentful is that *algunas gafas* 'several pairs of glasses' is a plurality of glasses, but that cannot come from *gafas* because *gafas*, a *pluralia tantum* noun, is not semantically plural (*unas gafas* 'a pair of glasses' is semantically singular) (I assume that -s_{unos} is only agreement).

If *algún* is as in (4), *mosca* in *alguna mosca* is semantically number neutral. Morphologically plural nouns, however, must be semantically plural: since *unas moscas* is semantically plural (Martí 2008) but *unas gafas* is not, *unos* cannot be semantically plural, but *moscas* must. A further hypothesis is that -s_{noun} = -s_{algunos} = [+add] (*algunas moscas*, is, hence "doubly" [+add], but this is harmless because (−add(+add(+add(P)))) is indistinguishable from (−add(+add(P)))); see below). Morphologically plural nouns being semantically plural is not a problem with downward-entailing quantifiers (Lasersohn 2011, Schwarzschild 1996, a.o) if these quantifiers access the atomic individuals provided by the plural individuals in the denotation of those nouns (cf. Chierchia 1998, Lasersohn p. 1136). This approach predicts, correctly, that *unos* and *un*, because they lack *alg*-, are not approximative.

In Harbour's theory, the features [±add], [±atomic] and [±minimal], together with certain parameters, derive an impressive amount of generalizations about the expression of nominal number cross-linguistically. My approach opens the door to a theory of D-related number features. Neither the *algún-algunos* distinction, nor, e.g., the Adyghe paucal (*zərəzxer* '1-2'), greater paucal (*lawəze* 'more than 1-2 but not many') and greater plural (*pčaʁe* 'quite a few, but not many') Ds (Nikolaeva 2012; my labels) would be accidental.

Lingua Franca: Written evidence?

Joanna Nolan (SOAS)

Lingua Franca has always been thought of as exclusively oral and our knowledge of it consequently indirect. However, this paper highlights recent evidence from archives suggesting that a form of Lingua Franca may also have been used in writing.

The Mediterranean was for centuries a centre of commerce, war, diplomacy and piracy. Ports were metropolitan and multilingual, particularly the Barbary regencies with their population of European merchants, diplomats, renegades, Arab elites and Christian slaves. The linguistic pluralism fostered the development of Lingua Franca, a trading pidgin, variously described as 'ni de otra nación alguna' (no one nation's language) (Cervantes 1605), corrupted Italian (Peysonnel 1787; Frank 1851), and different combinations of Romance languages and Arabic (Haedo 1612; La Condamine 1731).

For researchers, Lingua Franca has long been an elusive entity. Hugo Schuchardt, the 'father of Pidgin and Creole Studies' (Holm 2000) compared it to a mythical sea snake (Schuchardt 1909). More recently, the metaphor was updated to the Loch Ness Monster (Selbach 2008), and the late Joe Cremona entitled his research into Lingua Franca 'Sherlock'. Inconsistency (of grammar and lexicon) is its most consistent feature due, in part, to its geographic and diachronic spread. It existed as a pidgin for more than 250 years yet did not creolize, and its reach is documented from European ports on the Mediterranean with sightings across the sea into North Africa, Egypt and throughout the Levant.

This paper explores whether Lingua Franca was also a written pidgin. Letters from Livornese Jewish merchants to the English consul in Tunis, archived at the National Archive in London feature variants of Italian which in grammar and vocabulary resemble descriptions of Lingua Franca by contemporary 17th and 18th century sources. One of the clearest examples comes from a 1687 letter (PRO 335/6) written by a merchant, Sittenmajir, asking for a job in Tunis: "Mi par mille annj di uscire fori di questo paese" and a few lines later emphasising "fora di Livorno". There are several hallmarks of Lingua Franca – a tonic object pronoun used as a subject (*mi* - I), the infinitive form of the verb (*uscire* – to leave), and variation – (*fori* and *fora* – out of), the latter form, f*ora*, particularly significant since it was much-used in Lingua Franca and derives from Portuguese rather than Italian or Spanish. Other letters provide evidence of similar and additional linguistic features that substantiate the claim in this paper.

Tense morphology and argument structure alternations: An analysis of prenominal modifiers in Japanese

Ryo Otoguro (Waseda University)

The boundary between inflection and derivation is often assumed to be clear-cut. Inflectional morphology typically operates over morphosyntactic features and defines word forms without changing their meanings, while derivational morphology is normally a meaning-changing operation and often involves a category shift. However, as illustrated by Haspelmath (1996), there are a number of cases in which word formation takes place across the threshold between those two domains. This paper aims to shed light on the theoretical issues of such cross-domain morphological operations by presenting an analysis of prenominal modifiers in Japanese.

The verbs in Japanese inflect for tense, and the past tense is realized by suffixation of *-ta* to the stem. In (1), for instance, the past tense form of the transitive verb, *kir* 'put on', heads a tensed relative clause that modifies the following noun. In (2), however, the prenominal clause with a past tense verb has another interpretation that does not refer to a past event but describes the state of the modified noun as indicated by the translations. As convincingly argued in Ogihara (2004), the past tense verb form, but not the non-past tense form, can function as a tense-less attributive modifier. Crucially, this type of verbs cannot take an external argument when they are tense-less, so the existence of an external argument makes the clause obligatorily refer to the past event like (1).

(1) [sono zyosei ga *ki-ta*] kimono
that woman NOM put.on-PAST kimono
'the kimono that woman put on?'

(2) [hadena kimono o *ki-ta*] zyosei
showy kimono ACC wear-PAST woman
'the woman who put on a showy kimono/ the woman wearing a showy kimono'

Interestingly, the opposite pattern is found in prenominal adjective and nominal adjective modifiers. Although they are often analyzed as relative clauses due to their morphological non-past tense markings (e.g. Kuno 1973), Yamakido (2000) shows the cases in which the non-past tense adjectives with *-i* ending do not refer to non-past time events, namely they are tense-less attributive modifiers. Similarly, the non-past tense form of nominal adjectives ending in *-na* functions as a tense-less attributive modifier. Thus, a non-past tense form yields an ambiguity between a tensed relative clause and a tense-less attributive modifier, whereas past tense forms unambiguously encode tensed relative clause. Those data suggest that a function-changing operation, which is standardly assumed to be in the domain of derivational morphology, is realized by regular inflectional tense morphology.

To account for functional changes, we adopt Spencer's (1999, 2013) extended argument structure model. In this model, in addition to a list of arguments, semantic function roles, E and A, are specified in the argument structure, each of which encodes event properties and and state properties respectively. We argue that a kind of transitive verbs used in (1) and (2) have an embedded A function role with a theme argument. The attributive verb formation like (2) can be formalized as in (3a) where an E and an external argument are suppressed, so that tense is no longer active in syntax. Adjectives and nominal adjectives inherently lack an E role, so the predication is realized by adding an E role as in (3b), which enables them to encode tense as found in relative clauses. Those argument structure operations are independent from morphophological realizations. In the case of Japanese, despite their derivational nature, (3) involves tense inflectional morphology.

(3) a. <E<*x*, A<*y*>>> (transitive verb (=1)) ⇒ <~~E~~<*x*, <A<*y*>>>> (attributive (=2))

b. <A<*x*>> (attributive adjective/nominal adjective) ⇒ <$\underline{\text{E}}$<A<*x*>>> (predicative)

The current proposal not only formalizes the interplay between inflectional and derivational morphology found in the Japanese prenominal modifiers, but also potentially offers a typological framework to diverse patterns of inter-category lexical relatedness across different languages (cf. Haspelmath 1994).

Strong islands as absolute barriers to movement: Evidence from reconstruction

Ezekiel Panitz (UCL)

Under what is arguably the standard view of strong islands (SIs), SIs are *absolute* barriers to movement: whenever movement takes place across an SI, ungrammaticality ensues. This view of SIs contrasts with an alternative view, under which movement can indeed take place across SIs, albeit only under specific conditions. For instance, a number of authors have argued that movement licitly crosses SIs, provided the island is subsequently elided (Ross 1969; Lasnik 2001; Merchant 2008). Similarly, various authors studying *wh*-in-situ languages have proposed that movement legitimately crosses SIs, provided the movement takes place covertly (Huang 1982; Hagstrom 1998). Finally, Boeckx (2003, 2012) has proposed that movement can cross SIs, provided the moved expression leaves behind a resumptive pronoun (RP). In short, then, the two views of strong islandhood differ in the following manner: under the standard view, the barrierhood of SIs is absolute, ruling out all instances of extraction; under the alternative view, the barrierhood can be circumvented, but only under certain conditions.

In this talk, I present novel data from Brazilian Portuguese (BP) and from Hebrew which support the conclusion that the standard view of SIs is correct: SIs impose an absolute barrier on movement. This conclusion is based on two sets of judgements. The first set is drawn from an online survey, completed mainly by university students with little-to-no formal knowledge of syntactic theory, whose results indicate that there is a class of BP- and Hebrew-speakers that accept reconstruction down resumptive-chains, but only in sentences which do *not* contain an SI.

This result is precisely what is expected under the standard view of SIs. Thus, when there is not an island present, the resumptive-chain can be generated under movement – hence, the possibility of reconstruction – but when an island *is* present, movement is no longer an option – hence the absence of reconstruction. On the other hand, under the alternative view of SIs, the presence of the RP should sanction SI-crossing movement, which should, in turn, sanction island-crossing reconstruction. The impossibility of island-crossing reconstruction thus counter-exemplifies a basic prediction of the alternative view, while lending empirical support to the standard view of SIs.

The second set of judgements is based upon small-scale informant work on island-crossing filler-gap dependencies in BP. It has been noted (Ferreira 2000; Grolla 2005) that BP permits island-crossing filler-gap dependencies, provided the dependency culminates in direct object position. At first sight, the acceptability of a well-defined class of SI-spanning filler-gap dependencies seems to suggest that movement can, under certain conditions, take place across SIs. However, BP filler-gap dependencies exhibit reconstruction only in sentences which do not contain an SI, suggesting that BP filler-gap dependencies involve movement only in sentences which do not contain an island.

Once again, the absence of island-crossing reconstruction is surprising under the alternative view of SIs, but quite expected under the standard view. The present study thus offers new empirical evidence, in the form of reconstruction-data, in support of the conclusion that SIs impose an absolute barrier on movement.

Non-canonical objects in Yixing Chinese

John Joseph Perry (University of Cambridge) & Xuhui Hu (Peking University)

This paper concerns the nature of Chinese non-canonical objects (NCOs), i.e. post-verbal NPs not selected by the verb as a patient or theme (cf. Cheng & Sybesma 1998, Barrie & Li 2014, Huang 2013). We demonstrate that these objects do not form a unitary class, drawing on syntactic, semantic and phonological evidence from Yixing Chinese (Hu and Perry 2014), a largely undescribed Wu variety with complex tone sandhi. Consider the following (Mandarin) examples:

(1) i. *dǎ lánqiú* 'play ball' ii. *dǎ diànhuà* 'phone (v.)' iii. *dǎ gùnzi* 'hit with stick'
hit basketball hit telephone hit stick

Yixing Chinese has two sandhi processes which apply within different domains (described in Hu and Perry 2014), namely Pattern Substitution (PS) and Pattern Extension (PE). NCOs of the type seen in (1i), (1ii). and (1iii) respectively fall into separate categories in terms of tone sandhi. (1i) undergoes both PS and PE, (1ii) undergoes only PE, and (1iii) undergoes neither.

(2) i. daŋ$^{\text{HLL\%}}$ 'hit' + la^{11}ʤɔ^{15} 'basketball' >$_{\text{PS}}$ daŋ$^{\text{HH\%}}$ la^{11}ʤɔ^{15} >$_{\text{PE}}$ daŋ$^{\text{H}}$ laʤɔ H% > *daŋ^{55} la^{55}ʤɔ^{55}*
ii. daŋ$^{\text{HLL\%}}$ + dje^{13}wo^{11} 'telephone' >$_{\text{PE}}$ daŋ$^{\text{HL}}$ djewo L% > *daŋ^{51}dje^{11}wo^{11}*
iii. daŋ$^{\text{HLL\%}}$ + baŋ^{55}gɜn^{22} 'stick' > *daŋ^{51} baŋ^{55}gɜn^{22}*

These phonological distinctions correlate with syntactic and semantic distinctions – (2i, ii) allow an idiomatic, non-compositional reading, while NCOs of type (2iii) are always a straightforward composition of a predicate and an oblique argument (following Barrie and Li). Syntactically, a demonstrative may modify the object for (2iii), but not in (2i, ii).

(3) ŋo^{35} daŋ^{51} gə^{54} gən^{32} baŋ^{21}gɜn^{11} 'I hit with this stick'
1SG hit this CL stick (*ŋo^{35} daŋ^{51} gə^{54} gə^{32} dje^{21}wo^{11} Intended: 'I made this call')

The phonological difference between (2i) and (2ii) is also paralleled multiply in the syntax: the constructions in (2i) forbid the NCO from being fronted, which *is* possible for NCOs like (2ii) (which include the dummy NCOs discussed by Cheng and Sybesma 1998). The object of (2ii) may be modified (by a numeral here, but also by other quantifiers and even adjectives), but not that of (2i).

(4) ȵi^{35} dje^{13}wo^{11} daŋ^{51} mə^{55} 'Did you make a call?'
2SG phone hit Q.ANT (*ȵi la^{11}ʤɔ^{15} daŋ^{51} mə^{55} Intended: 'Did you play ball?')
ŋo^{35} daŋ^{51} sa^{54} gə^{32} dje^{21}wo^{11} 'I made three calls'
1SG hit three CL phone
(*ŋo^{35} daŋ^{51} sa^{54} gə^{32} la^{21}ʤɔ^{11} Intended: 'I played three basketball [games]')

We propose (with Hu and Perry 2014) that the VO chunks in (2i) are the result of directly Merging two bare ROOTs, which are later categorised, forming a single item for interpretation. Following Borer (2013) and Marantz (1997), the domain of a categoriser may be assigned an atomic, non-compositional meaning. What distinguishes (2iii) from (2ii), we suppose, is the presence of a D functional head (as suggested by the contrast in (3)) – D (or a higher head which selects it) heads a phase (cf. Svenonius 2004) and consequently blocks non-compositional interpretation. The VO chunks in (2ii) result from the Merge of V and a bare nP within a vP phase. What is crucial is that there is no additional phase boundary internal to the vP – the whole phase can thus be assigned atomic content, assuming that Encyclopedic information is accessible until a phase is complete (e.g. Embick and Marantz 2008). This explains this construction's non-compositional meaning. This absence of a syntactic phase boundary in (2ii) correlates to the absence of a prosodic boundary – an absence which permits PE sandhi to apply in Yixing, as discussed above. Our account independently captures the semantic and phonological generalisations distinguishing these different types of non-canonical objects, tying them to observable syntactic facts.

Plural markers in a classifier language - A view from Vietnamese

Trang Phan and Eric Lander (Ghent University)

Vietnamese is a classifier language which displays two plural morphemes: *những* and *các*. Given the cross-linguistic tendency that plural markers and classifiers do not occur in the same language (Chierchia 1998, Borer 2005), the question arises whether *những* and *các* are genuine plural markers in the sense intended in the literature, an issue which has not yet been settled.

Nguyen (2004) claims that *những* and *các* are lexical determiners in Vietnamese: *những* functions as the indefinite determiner whereas *các* function as the definite determiner. In this paper, however, we take issue with Nguyen's (2004) analysis and argue that these two lexical items have important properties which differentiate them from standard lexical determiners, as shown in (1). First, these items are not obligatory. In (1) we see that the subject nominal can receive a definite reading with or without the so-called determiner *các*. As seen in (1b), *các* only forces the plural reading.

(1) a. Con rất ngoan
child very well-behaved
'The child is very well-behaved.'
OR 'The children are very well-behaved.'

b. **Các** con rất ngoan
CAC child very well-behaved
'The children are very well-behaved.'

If the Vietnamese plural markers are not directly linked to definiteness, the question arises what really motivates their presence in Vietnamese nominal phrases. According to Thompson (1965:180), *các* emphasizes 'all of a given set of entities' whereas *những* implies that 'only certain of the total possible number are referred to'. Based on a close examination of their distributional properties (i.e., their position with respect to classifiers and numerals and their scope behaviour with respect to quantifiers) and their interpretational effect (i.e., their combination with different kinds of nouns), we will argue that *những* and *các* are markers of partitive specificity (in the sense of Enç 1991, Farkas 2002). Thus, the definiteness-like phenomena and optionality of *những* and *các* are only manifestations of their specificity. In particular, their main function is to introduce an existential presupposition of a set of entities and anchor it to a given domain of quantification or a pre-established context.

We will further argue that those peculiar properties of the so-called plural markers in Vietnamese result from the topic-prominent nature of the language (Li&Thompson 1976, Paul &Whitman 2015). We suggest that topicality is a function of specificity (along the lines of Cresti 1995, Portner 2002), and put forward the hypothesis that being topic-prominent means that the language has developed different grammaticalised devices to encode different kinds of specificity. In other words, plural markers are only part of a bigger set of specificity markers which include topic particles, 'expletive' subjects, classifiers, etc.

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Comprehension of novel metaphor in Autism Spectrum Disorder

Nausicaa Pouscoulous & Alexandra Perovic (UCL)

Figurative terms, such as metaphors, are pervasive in daily language use. To become a competent speaker of a language a child must learn to interpret correctly metaphorical expressions never heard before (e.g., "After her bath, Ann is a hedgehog" when Ann has spiky hair). To do so, the child needs first to recognise the syntactic structure where the metaphorical term appears, understand its literal meaning, then make a full-fledged pragmatic inference, identifying the relevant metaphorical features in context (e.g., spikiness), and ignore the inappropriate literal meaning. Early research suggests this is a slow process, yet recent findings indicate even pre-schoolers are competent at understanding metaphors when tested with paradigms controlling for the child's vocabulary, the type of metaphor (novel or conventional) and the cognitive demands of the task (Pouscoulous 2011). But, what happens when the child is autistic?

Children with Autism Spectrum Disorder (ASD) experience noticeable difficulties with figurative speech (Rundblad & Annaz 2010), possibly linked to their impaired theory of mind (Happé 1993) or to their overall linguistic and especially semantic abilities (Norbury 2005). Yet, immature linguistic skills might affect the comprehension of figurative language regardless of autistic symptomatology (Gernsbacher & Pripas-Kapit 2012).

This study investigates comprehension of novel, rather than conventional metaphors, the latter of which require previously acquired knowledge, in 51 English-speaking children with ASD (Chronological Age: mean 10;09, range 4;11-17;5 ; non-verbal IQ KBIT SS:40-127; *M*=76.7; BPVS-2 SS:40-121, *M*=82), matched to younger typical controls (CA: mean 5;08, range 2;11-9;11) on non-verbal Mental Age (MA) (KBIT raw: ASD *M*=16.57; TD *M*=15.8); and verbal MA (BPVS-2 raw: ASD *M*=65;TD *M*=57).

We used a task minimising cognitive demands to determine where the difficulties with metaphor comprehension arise – i.e., insufficient vocabulary knowledge, difficulty with taking context into account, or inability to make a pragmatic inference. In an act-out reference assignment task, children were shown pairs of minimally different toys and asked to choose the one matching the metaphorical description (e.g., 'a car with a sick foot'). Children were subsequently also tested on their knowledge of the key vocabulary used in the metaphorical items.

A regression analysis model showed no statistically significant difference between groups, with both performing near ceiling on all 6 experimental items. Performance of the ASD group was not linked to their CA, but was highly correlated with non-verbal and verbal MA. In the control group, CA was somewhat relevant to their success in interpreting novel metaphors, but again non-verbal and verbal MA played a more important role. Contrary to the literature showing that metaphor comprehension is significantly impaired in ASD, our results indicate that a methodology that controls for vocabulary knowledge and minimizes the cognitive demands of the interpretation process helps children with ASD correctly interpret novel metaphor on par with younger controls. While there was no significant difference between groups, our findings suggest the children's overall linguistic ability (grammatical and vocabulary skills) may affect metaphor comprehension independently of autistic symptomatology.

Obviation and competition in clausal gerunds

Matthew Reeve (UCL)

Since the work of Reinhart (1983) and others, Condition B effects have often been taken to result from competition between anaphors and pronouns, anaphors being considered to be more 'dependent' or 'economical' than pronouns (e.g., Reuland 2001, Safir 2004). The preference for null subjects over overt subjects in constructions such as (1) has also been treated in terms of competition, but here the rationale is typically a kind of 'economy of effort' principle ("Don't say more than you need to"; e.g., Chomsky's 1981 'Avoid Pronoun Principle').

(1) Mary_1 preferred/hated [PRO_1/Bill/*her_1 leaving early].

Clearly, it would be preferable to have a single competitive principle decide between PRO, anaphor and pronoun. In this talk, I will argue, partially following Safir (2004), that competition involves a scale of 'specificity' (PRO > anaphor > pronoun), where more specific blocks less specific. The scale is constructed in terms of how small the 'antecedent domain' of the DP is: obligatory PRO being most specific in this sense, followed by anaphors and pronouns. I follow Landau (2000) in assuming that in some positions either PRO or an overt DP may appear; assuming that competition only operates on otherwise identical structures, this allows for competition between PRO, anaphors and pronouns.

Assuming Reinhart & Reuland's (1993) version of Principle A ("A reflexive-marked syntactic predicate is reflexive"), the pattern of obviation in gerunds below can be accounted for. In (2), PRO obviates both reflexives and pronouns.

(2) *Context:* What's wrong?
  a. Mary_1 hates [PRO_1/*herself_1/*her_1 leaving early].
  b. I envy Bill_1 [PRO_1/*himself_1/*him_1 being a genius].

In (3), however, PRO is independently ruled out because the context forces it to be stressed; in this case a reflexive is possible in (3a) because it may reflexive-mark the matrix predicate. In (3b), however, a reflexive is impossible, arguably because the matrix object *Bill* induces an intervention effect for Case, preventing *v* from Case-licensing *himself* under ECM. In these circumstances, *himself* cannot reflexive-mark the matrix syntactic predicate (syntactic predicate being defined partially in terms of Case-licensing). As expected, the competition principle is suspended here, and a pronoun may represent the desired meaning.

(3) *Context:* Mary hated Bill leaving early, didn't she?
  a. No, Mary_1 hated [*PRO_1/HERSELF_1/*HER_1 leaving early].
  Context: You envy Bill his mother being a genius, don't you?
  b. No, I envy Bill_1 [*PRO_1/*HIMSELF_1/HIM_1 being a genius].

I will show that pattern is problematic for alternative theories not based on competition (e.g., Reinhart & Reuland 1993), as well as the 'movement theory of control' analysis of obviation (Hornstein & San Martin 2001).

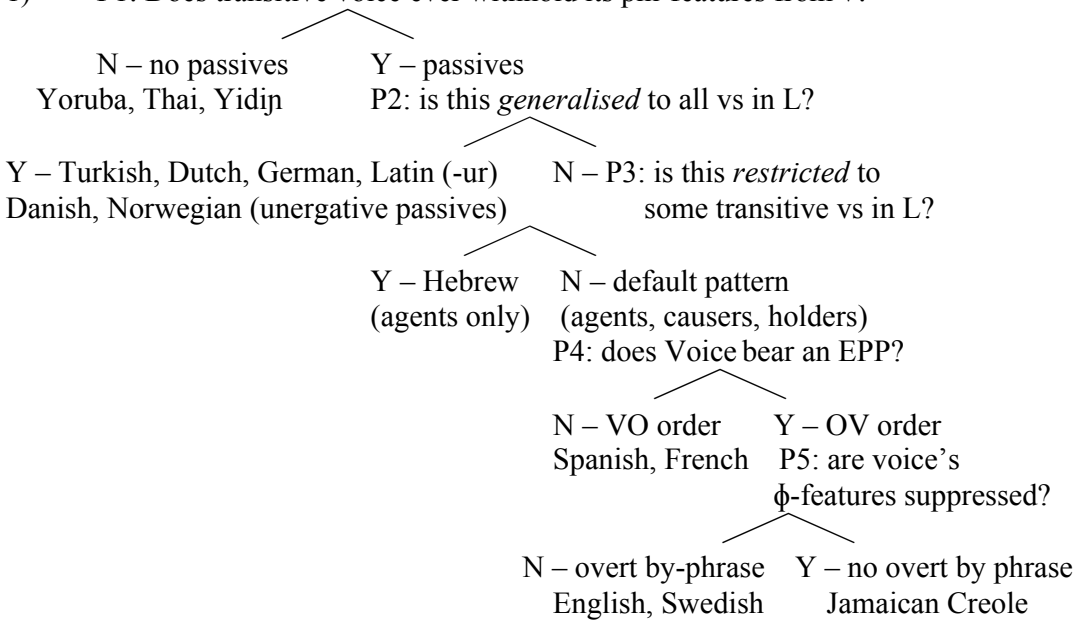
Chomsky, N. (1981). *Lectures on government and binding*. Dordrecht: Foris. Hornstein, N. & San Martin, I. (2001). Obviation as anti-control. *Annuario del Seminario de Filología Vasca 'Julio de Urquijo'* 35: 367-384. Landau, I. (2000). *Elements of control: structure and meaning in infinitival constructions*. Dordrecht: Kluwer. Reinhart, T. & Reuland, E. (1993). Reflexivity. *Linguistic Inquiry* 24: 657-720. Reuland, E. (2001). Primitives of binding. *Linguistic Inquiry* 32: 439-492. Safir, K. (2004a). *The syntax of anaphora*. Oxford: Oxford University Press.

A parameter hierarchy for passives

Ian Roberts (University of Cambridge) & Michelle Sheehan (Anglia Ruskin University)

Building on and amending Collins' (2005) analysis, we propose the following parameter hierarchy to model typological variation in the passive:

1) P1: Does transitive voice ever withhold its phi-features from v?



Assuming Chomsky's (2008) feature inheritance, the passive arises, we propose, where Voice withholds its phi-features from v, so that v fails to assign accusative Case and Voice licenses the external argument in SpecvP, (if it retains its ϕ-features) giving rise to a *by*-phrase (or equivalent). In some languages this option is never taken, resulting in a lack of passives (Yoruba, etc.). In many languages this happens only in transitive contexts (Hebrew, French, English etc.), but in others it is generalised to all little vs, giving rise to passives of unergative verbs (Turkish, Dutch, etc.). In other languages, this operation is restricted to a subset of little vs (agentive vs in Hebrew, for example, Doron 2003). Other parameters concern the order between V and O in passives, which can be observed in expletive-associate constructions: while English permits only OV order (as in *there were several students arrested*, with *several students* in SpecvP), Swedish has both OV and VO (with different agreement patterns) and Spanish and French have only VO (Svenonius 2000, Holmberg 2001):

2) Det har blivit tre böcker *skrivet/ skrivna om detta.[Swedish]
it have been three books written.N.SG/written.PL about this

As a marked option, Voice's phi-features can be supressed altogether, leading to a ban on by phrases, as in Jamaican Creole. In such cases, the external argument behaves like NOC PRO.

3) Di leta rait (*bai im) [Jamaican Creole]
the latter write by him 'The letter was written.' (LaCharité and Wellington 1999: 260)

We also discuss some difficulties arising for (1), notably the apparent possibility of passives of unaccusatives (Kiparsky 2013), which we argue to be impersonals (Blevins 2003).

The hierarchy in (1), we argue, is not limited to the passive, but is actually the parameter hierarchy regulating alignment in transitive clauses (ergative vs. accusative – author 2014), causatives (dative vs. accusative causees – author 2015) and possibly also ditransitives (secundative vs. indirective – Dryer 1986). Rather that being hardwired in UG, it emerges from a number of interacting acquisition pressures combined with the need to create convergent derivations. The dependencies between the parameters serve to limit the space of variation and model hitherto unexplained implicational universals.

Kayardild TAM and the typology of feature systems

Erich Round (University of Queensland) & Greville G. Corbett (University of Surrey)

Any linguist who thinks they have a clear notion of what is a "possible human language" might well check it against Evans' grammar of the Australian language Kayardild (Evans 1995), to have their notion refined or perhaps shaken. The influence of Kayardild continues, for instance through Round (2013, 2015). Here we revisit an area where Kayardild is particularly revealing, and one where Evans and Round proposed similar analyses: in slightly different ways, both claimed that there were *two* TAM systems in Kayardild. Among all the unusual traits of Kayardild, its twin TAM systems have not drawn particular attention. Yet while it is perfectly possible for a language to have two systems of the same type (e.g. Michif has arguably two cross-cutting gender systems, Corbett 2012, citing Bakker & Papen 1997), this is relatively unusual.

We review the claim of two TAM systems in Kayardild, and argue for a reanalysis which is cross-linguistically more usual. We start by examining carefully the arguments which would in general justify postulating two systems rather than one, and thus we contribute to the theory of feature systems and their typology. Then we ask specifically with respect to Kayardild TAM what we would gain or lose by assuming alternatively one system or two, as we attempt to account for five key properties: [1] the orthogonality of features; [2] semantic compositionality; [3] the licensing of TAM types in various clause structures; [4] the distribution of TAM inflection across smaller clausal constituents; and [5] the patterns of syncretism. This leads us to revisit the corpus of Kayardild, to check on instances which are rare or in some cases questionable, in order to give a more refined analysis of the data.

Our finding is at variance with both Evans and Round; on all five counts, the evidence which would motivate an analysis in terms of one TAM system or two is either approximately balanced, or clearly favours an analysis with just one system. The putative twin TAM systems [1] exhibit little of the orthogonality one would expect, rather their values are typically tightly paired; this is in contrast with NEGATION for example, which is robustly orthogonal to TAM values; and [2] exhibit little in the way of semantic compositionality, other than in one small part of the system, which we argue could be treated as a second kind of NEGATION marking. Relative to a one-system TAM analysis, the two-system analysis: [3] relates in an equally idiosyncratic fashion to principles which license TAM types in various clause structures; [4] leads to a moderately less complex set of statements about the distribution of TAM inflection across smaller clausal constituents; [5] fails to reflect a large class of generalisations regarding syncretism of TAM marking within clause types.

In sum, we demonstrate that, even in the face of highly complex language data, it is possible to apply a principled approach to the question of whether we are dealing with one feature system or two, which is encouraging for the many of us seeking a rigorous science of typology. We also find that Kayardild, which in many ways is excitingly exotic, is in this one corner of its grammar quite ordinary.

PPs with Gaps in

Craig Sailor & James Griffiths (University of Groningen)

In keeping with the Borer-Chomsky Conjecture, recent approaches to dialectal microvariation have sought to reduce surface variation to the influence of individual features on particular syntactic heads (Barbiers 2013 a.o.). We apply this methodology to a novel point of dialectal microvariation in English PPs. In dialects spoken in England (BrE), certain PPs within possessive structures can surface with a gap in the P-object position, an option entirely unavailable in other varieties (e.g. American English: AmE).

(1) a. [This film]$_i$ has monsters in _$_i$. (✓BrE; AmE: *...in* ***it***$_i$)
b. [These houses]$_i$ with an alley between _$_i$ are derelict. (✓BrE; AmE: *...behind* ***it***$_i$)

These *prepositional object gaps* (POGs) are not simply dropped topics: though certain PPs allow null P-objects (2) in all English varieties, POGs are uniquely licensed in *HAVE/WITH possessive constructions* (HWPs) in BrE (compare (3) and (1b)).

(2) I visited [the British Museum]$_i$. Inside _$_i$ I saw the Rosetta stone. (✓BrE; ✓AmE)
(3) Here's [those old houses]$_i$. * Between _$_i$ is a dark alleyway. (*BrE; *AmE)

Further, POGs are not licensed if they appear within genitive *of* phrases (4a) or path PPs (4b).

(4) a. * [This church]$_i$ has trees outside [$_{\text{GenP}}$ of _$_i$].
b. * [This pipe]$_i$ has water flowing [$_{\text{PP-path}}$ from _$_i$].

We argue that the syntax of HWPs plays a crucial role in licensing POGs. Building on unified analyses of HWPs such as Levinson's (2011), we show that the dependency between the possessor and the POG is, surprisingly, an A-dependency – the gap is derived by A-movement of the possessor across the intervening possessum, akin to subject-raising across an experiencer. Moreover, microvariation in the availability of POGs can be reduced entirely to the selectional properties of the possessive head (i.e. HAVE/WITH) in HWPs.

Concretely, we propose that HAVE/WITH in BrE may select for a prepositional small clause complement that lacks an oblique case assigner, forcing raising of the possessor. In e.g. (1a), *has* selects a case-deficient small clause, so A-movement occurs for *this film* to get case.

(5) [This film]$_1$ has [$_{p\text{P}}$ monsters [$_{p'}$ $p_{[\text{-CASE}]}$ [$_{\text{PP}}$ in t_1]]].

There is no intervention here: *monsters* receives case locally from v^0 (*have*) and is not an intervener when *this film* moves for case (akin to subject-raising across an experiencer: *John*$_1$ *seems to* ***me*** *to* t_1 *be smiling*). This does not arise in other Englishes (e.g. AmE) because HAVE/WITH in these dialects **always** select a case-assigning small clause. This proposal predicts that while the schema in (6a) licenses POGs in BrE, the schema in (6b) does not. (6b) cannot license POGs because an additional case-assigner $\alpha_{[+\text{CASE}]}$ intervenes between $p_{[\text{-CASE}]}$ and the P-object. As such, the P-object will get case from $\alpha_{[+\text{CASE}]}$ in-situ.

(6) a. [possessor$_1$ HAVE/WITH [$_{p\text{P}}$ possessum [$_{p'}$ $p_{[\text{-CASE}]}$ [… t_1]]]]
b. * [possessor$_1$ HAVE/WITH [$_{p\text{P}}$ possessum [$_{p'}$ $p_{[\text{-CASE}]}$ [… $\boldsymbol{\alpha}_{\textbf{[+CASE]}}$ … t_1]]]]

The schema in (6b) can therefore be used to probe the syntax of the English PP. For example, we show that while Svenonius (2010) is correct that English PPs follow a '*path* > *spatial* > *genitive*' functional template, not all of this array is projected at all times, a matter that has been debated in the Cartographic literature (cf. Cinque 1999:133). As such, POGs reveal more general conclusions about English PP structure.

Selected references: Cinque, G. 1999. Adverbs and Functional Heads: A Cross-Linguistic Perspective. OUP. ■ Levinson, L. 2011. Possessive WITH in Germanic: HAVE and the Role of P. *Syntax* 14(4): 355–393. ■ Svenonius, P. 2010. Spatial P in English. In G. Cinque & L. Rizzi (eds.), *Mapping Spatial PPs*. OUP, 127-160.

Building on Reinhart (1995) and Cinque (1993,1999), I will present an as yet unstudied pattern of pied-piping asymmetries in Italian and argue that the factor determining them is prosodic in nature and yet sensitive to the syntactic make-up of the constituents involved.

I will show that given a phrasal sequence 'A_F B', with A focused and B containing two items Y and Z, whether Z can raise alone or must pied-pipe B depends on B's structure. If Y is the specifier of B, then Z can move alone. If Y is the lexical head of B, then Z must pied-pipe B. See for example (1) and (2) below. In (1), Y (the adverb *sempre*) is the specifier of an empty headed functional projection containing Z (*nei nostri inviti*) as its complement (Cinque 1999). In (2), Y (*l'arrivo*) is the lexical head of a nominal projection and takes Z (*di Marco*) as its complement. As the contrast in the (b) sentences shows, Z may move without pied-piping only in (1). (Main stress is shown in capitals.)

(1) a. Da allora Maria non spera [*sempre* [*nei nostri inviti*]]$_i$ mica PIÙ$_F$ t$_i$.
Since then Mary not hopes [always [in-the our invitations]] no longer
'Since then, Mary does no LONGER always hope for our invitations.'

b. Da allora Maria non spera [*nei nostri inviti*]$_i$ mica PIÙ$_F$ [*sempre* t$_i$].

(2) a. Ha filmato [*l'arrivo* [*di Marco*]]$_i$ la POLIZIA$_F$ t$_i$.
has filmed [the arrival [of Mark]] the police
'The POLICE filmed Mark's arrival.'

b. * Ha filmato [*di Marco*]$_i$ la POLIZIA$_F$ [*l'arrivo* t$_i$].

This alternation, which will be supported by additional examples, requires an explanation. Yet, there is no obvious syntactic reason why Z cannot move in (2b), especially since the same constituent can be wh-extracted and focus-fronted. There is, however, an important prosodic difference between the two structures. When Y is a specifier, Y and Z project two separate phonological phrases (or *pp*'s), whereas when Y is a head, Y and Z must share the same *pp*. See (3) and (4), where *pp*'s are identified by round-brackets, *ip* is the sentential intonational phrase containing them, and 'x' represents the local stress of each prosodic phrase (Truckenbrodt 1995).

(3) Y is a specifier:

(x _ _)$_{ip}$
(x) (x)(x)$_{pp}$
A_F [Y Z]

(4) Y is a head:

(x _)$_{ip}$
(x) (x)$_{pp}$
A_F [Y Z]

I will show that Z may move in (3) but not in (4) because only in (3) its movement improves the prosodic alignment of main stress. In Italian, stress must occur as close as possible to the right edge of the sentential *ip*. In (3), main stress on the focused A is two *pp*'s away from the right edge. Z can move above A because its movement improves stress-alignment by removing one *pp*. In (4), instead, Z's movement does not improve stress-alignment because Y must still project its *pp*, leaving the cost of movement unjustified. Finally, pied-piping the entire B phrase, i.e. [Y Z], is possible under both structures because it removes all intervening *pp*'s, thus again improving stress-alignment. In so far the analysis is correct, it highlights the relevance of prosodic factors in syntax as argued, amongst others, in Zubizarrreta (1998), Szendröi (2001), Büring (2001), Samek-Lodovici (2005), and Dehé (2005).

Overview: This paper makes a novel link between the nature of fragment answers and superlative interpretations to argue against two recent approaches to fragment answers, and shows that the fragment undergoes movement in narrow syntax and not just PF.

Fragment Answers involve answering a question (1a) without pronouncing the full sentence (1c), but a subpart of it as in (1b). Merchant (2004 a.o.) argues that fragment answers are derived from movement and ellipsis. In (2), the fragment answer starts as a full answer, then the fragment *apples* undergoes movement to Spec,CP, and the rest of the sentence is elided.

(1) a. What did John eat? b. Apples. c. John ate apples.

(2) [$_{CP}$ Apples [$_{TP}$ ~~John ate~~ $t_{Apples.}$]] (3) ~~John ate~~ apples.

Recent analyses deviate from the Merchant-style movement approach. Weir (2014, 2015) argues that the fragment only moves in PF thus has no interpretive effects. Ott & Struckmeier (2015a, b) argue that fragment answers do not involve movement and the rest of the sentence gets elided as in (3). Both accounts predict that the fragment will be interpreted in its base-generated position, either trivially or through reconstruction.

Relative Reading with NP Internal Focus (RIN) is recently observed by Pancheva & Tomaszewicz (2012) (P&T) in superlative expressions such as *the largest photo of Dog*. RIN is true in the scenario in (4), which can be paraphrased as 'among the photos that Sally bought, the largest one is of Dog'. Although (4a) does not allow RIN, Shen (to appear) observes that RIN is available in English once the focus *Dog* is **overtly moved** out of the superlative DP in constructions such as cleft in (4b).

(4) Scenario: There are three photos of Dog and three photos of Fish for sale. Sally bought one photo of Dog and two photos of Fish as indicated in the picture.

a. *Sally bought the largest photo of Dog.
b. It was Dog that Sally bought the largest photo of.

All the RIN accounts argue for an LF in (5) where crucially the focus *Dog* is required to move to the clausal level (P&T; Shen 2013, to appear; Tomaszewicz 2015). In other words, the movement of *Dog* is necessary for RIN (4b). In (4a) the non-movement of *Dog* rules out RIN.

(5) [Dog$_F$ [[$_{DegP}$ EST-C] [~S [Sally bought t_{DegP} large photo of t_F]]]]

Crucial Example in (6): RIN + Fragment. In the scenario in (4), the *wh*-question in (6) can be answered with the fragment answer in A1, indicating RIN, but not with the full answer in A2. If Weir's and Ott & Struckmeier's approaches are on the right track, (6-A1) cannot have an interpretation that is missing in the full answer. On the other hand, if the fragment *Dog* in A1 does undergo movement in narrow syntax, the data fall out naturally: *Dog* moves to the clause domain, the LF for RIN is generated, and the rest of the sentence has elided as in (7).

(6) Q: Of what did Sally buy the largest photo? (adopted from Szabolcsi 1986)
A1: Dog. A2: *Sally bought the largest photo of Dog.

(7) LF for (6-A1): [Dog$_F$ ~~[[$_{DegP}$ EST-C] [~S [Sally bought t_{DegP} large photo of t_F]]]~~]

References: Merchant 2001, 2004; Pancheva & Tomaszewicz 2012 WCCFL 30; Shen 2013 WCCFL 31, to appear PLC 38; Szabolcsi 1986; Tomaszewicz 2015 SALT; Weir 2014 Umass Diss, 2015 LSA; Ott & Struckmeier, 2015a PLC 39; 2015b WCCFL 33.

Participial relatives and the lexemic index

Andrew Spencer (University of Essex)

Participles are deverbal transpositions with the morphology and external syntax of an adjective but preserving various verb properties (TAM, voice, argument structure, …), and typically preserving the lexical semantics of the base verb (no added semantic predicate). As attributive modifiers they are often a language's canonical relative clause type (PTCP-RCs), usually restricted to relativizing on the SUBJ [*the* [___ *writing a letter*] *girl*], less commonly on other GFs, e.g. Limbu (van Driem, 1987). PTCP-RCs raise two important analytical questions: (i) how to represent PTCP-RCs syntactically as simultaneously AdjP and VP (ii) how to treat them morphologically as forms of a verb lexeme when they inflect like adjectives.

Ackerman/Nikolaeva (2013) discuss PTCP-RCs in Tundra Nenets which reference the RCs SUBJ argument by means of POSS agreement on the head (*my$_i$-book which (I$_i$) bought you*), providing an HPSG-Construction Grammar analysis. This addresses problem (i) but since they just label the participle as 'mixed category' they don't address problem (ii). Lowe (2012) provides a detailed LFG analysis of Ṛgvedic participles, treating them as reduced RCs, hence as VPs in c-structure. Participles agree with the head noun exactly like a canonical adjective but Lowe treats this as feature matching with a (necessarily empty) RELPRON attribute in the RC's f-structure, thus losing the parallel with true adjectives. He, too, just labels the participles as [VFORM participle], thus failing to address question (ii).

I provide a general solution to problems (i, ii) framed in LFG. Categorial 'mixing' is defined by the morphology over lexical representations. Participles are the 'adjectival representation' of V, hence a member of the paradigm of the V base lexeme. I assume Haspelmath's (1996) morphosyntactic 'supercategory' REPR(ESENTATION), participle = [REPR:V2A]. The [V2A] form of a verb lexeme retains the verb's event-related f-structure and arg-structure but also inherits the agreement morphosyntax of adjectives. Hence, the f-str correspondent of a c-str node headed by a participle includes the base verb lexeme's GF structure, but is also specified for Adj-N agreement features: [$_{\text{NP}}$ *the* [$_{\text{V2A-P}}$ [$_{\text{V2A}}$*writing*.F.SG.NOM] *a letter*] *girl*[F].SG.NOM]. The analysis carries over to the possessive RCs of Nenets, as well as Limbu PTCP-RCs.

Participles are closely related to other types of deverbal adjective which constitute distinct lexemes from the base V. In general, such derived lexemes have additional semantics, but this isn't sufficient to distinguish transpositions from derivation proper. Selkup has Adj representations of nouns ('relational adjectives') which have an additional semantic predicate, while many languages have denominal adjectives which are 'transpositional lexemes', distinct lexical items from the base (hence, derivational) but with the same lexical content (e.g. *prepositional* $\simeq$ *preposition*). I therefore follow Spencer (2013) in defining transpositions as category-changing morphology which preserves lexemic identity, as reflected in a constant 'Lexemic Index' (LI) (cf 'lexical index', Stump, 2001; 'Lexical Identifier' (LID), Bonami 2015'). This cannot be tied to semantics (contra Sag, 2012), nor can it be reduced to the phonology of the root (as in Distributed Morphology, Borer 2013) — that claim entails that lexically suppletive roots (e.g. $\sqrt{go} \sim \sqrt{went}$) are impossible, which is flatly contradicted by the facts. LFG apparently lacks a notion of 'lexemic index', but I show that, in fact, the PRED attribute now has just and only this function: the Glue language accounts for Consistency/Coherence (Andrews 2007, Asudeh 2012) and Predicate Uniqueness will follow from the way lexemes are instantiated in syntactic structure.

Uniform and non-uniform analysis of bracketing paradoxes

Sam Steddy (UCL)

1. Intro I argue that the types of Bracketing Paradox in (1) are *not* uniform phenomena as, save the shared issue of level ordering (order of morpheme merger), they present distinct problems for further analysis. In analysing these, I allow free order of morpheme merger

(1) a. Comparative BP: *unclearer* b. Left-branching BP: *nuclear physicist*

2. Comparative BPs are theoretically interesting both for phonology, as they allow the comparative morpheme *-er* to suffix a root longer than 1~2 syllables (2a), and for semantics, as they only allow the interpretation 'more not *x*' (2b). I argue these points are related.

(2) a. *unclearer*, *unhappier* ; **transparenter, *intelligenter*
b. *unclearer* - 'more unclear, *not clearer' cf. *unlockable* - 'can unlock, cannot lock'

Following Pesetsky (1985), if (2a) is derived by LF raising of the suffix, the derivation can initially merge *-er* to the root, where the suffix's phonological restriction can be met:

(3) [clear - er] → [un - [clear - er]] → [[[un- [clear - t_i]] -er$_i$]

The comparative morpheme is identified in semantic literature as a quantifier (over degrees) which must take scope with the Comparative Clause - the '*than*…' phrase (Bhatt & Pancheva 2004, Beck 2009). This theoretically grounds raising of *-er*, but also derives (2b): QR always raises *-er* above negation, but *un-*, not being a quantifier, cannot then raise to outscope *-er*

This does not preclude the alternative derivation which merges *un-* to the root before *-er*. I argue this derivation results in a periphrastic structure, due to the length of *-er's* compliment:

(4) [un - clear] → [[un - clear] - er] → [more [un - clear]]

3. Left-branching BPs are compounds and other examples which could be derived from left- or right-branching structures, but for which regular semantic interpretation corresponds to the former. For example, *nuclear physicist* is interpreted as 'person studying nuclear physics', but the alternative, 'physicist who is nuclear' is interpretable, if not in conventional usage.

These raise an issue for theories of morphological locality as they show allomorphy conditioned in what I argue are non-local environments, or over a cyclic head/phrase node, in the terminology of Embick (2009)/Bobaljik (2012). *Nuclear physicist* is a problem as *nuclear physics* is morphologically complex: unlike other types of compound, it is decomposable and subject to syntactic operations such as ellipsis and/or coordination (Borer 2008).

(5) a. John met a *theoretical and applied physicist* b. John saw a **blue- and blackbird*

I argue the solution to this problem is found in the conflation of allomorphy/suppletion, with idiomacy or Embick's 'special' interpretation. In the Distributed Morphology architecture of Bobaljik, I propose morphologically-conditioned allomorphy *can* apply over a phrase node. DM Vocab Insertion spells out the desired allomorph of *physics* in a specific (complex) environment (6a; π represents suffixes *-ist*, *-ian*, etc.), but allows spellout elsewhere (6b).

(6) a. PHYSICS ↔ /fizis/ / __]$_{x°/xP}$ -π b. PHYSICS ↔ /fiziks/

Strict locality is thus proposed to govern interpretation alone; only direct merger of one morpheme to another results in idiomatic interpretation. All examples above, including comparatives (and indeed Bobaljik's survey of comparative allomorphy), are decomposable.

4. Conclusion. Several issues related to BPs have been derived in a non-uniform manner, but analysis does uniformly allow BPs to be built with free order of morpheme merger. This has further implications. Unambiguous BPs, eg *ungrammaticality*, can be derived with selectional restrictions: *un-* cannot prefix nouns. Similarly, with the use of locality to derive idiomacy, Pesetsky's observation that *unrarity* is not a concrete noun (cf. *rarity*) is derived: rare-ity can derive an idiomatic concrete reading, but as above, *un-* must be able to be merged first

Obligatory pronominal A- and A'- binding

Laura-Andreea Sterian (University of Edinburgh)

Clitic-doubling (A-binding of a pronoun with a shared θ-role) and resumption (A'-binding of a pronoun with a shared θ-role) have been much researched, however the (dis)similarities between them have been studied in less depth. Romanian is a striking example of a language which exhibits both these phenomena. Earlier accounts of resumption in Romanian consider it to be parasitic on clitic-doubling (Steriade 1980; Comorovski 1986; Dobrovie-Sorin 1990). I present a systematic overview of pronouns with antecedents in A- and A'-positions in Romanian which shows that in fact resumption is independent of clitic-doubling. Although there is an overlap in clitic-doubling and resumption, this comes apart in two directions: (i) some sentences where clitic-doubling is obligatory have corresponding content questions in which the doubling pronoun is illicit, and (ii) some sentences where clitic-doubling is illicit have corresponding A'-constructions with obligatory resumption. I illustrate the latter case in (1):

(1) **a.** Nu *o/ ___vede niciodată marea.
neg *her/ ___see.3S never sea=the.F
'He never sees the sea.'

b. Îi părea rău după marea pe care nu *__/**o** vede niciodată.
him.Dat seemed bad after sea=the.F *pe* which neg *__/**her** see.3S never
'He sorrowed after the sea which he never sees [**her**].'

The obligatory resumption in relative clauses such as (1b) is also observed in D-linked content questions, contrasting with lack of resumption in questions with bare interrogatives. Significantly, relative clauses and D-linked content questions also have in common the relative pronoun/ D-linked interrogative *care* "which". I argue that resumption arises in Romanian because of (i) the nature of the D involved: *care* "which" has a categorial selectional feature that requires it to take a complement headed by the resumptive pronoun and (ii) the resumptive pronoun is a clitic in the sense of Cardinaletti and Starke (1999) and therefore cannot surface in its base position, but must raise to a derived one. I analyse the resumptive pronoun as of category φ (Déchaine & Wiltschko's 2002; Roberts 2010). In (1) the relative pronoun *care* "which", the resumptive pronoun *o* "her" and the noun *mare* "sea" form a complex-DP (2) that starts out in the derivation as complement of the verb *vede* "sees". Then φ raises to a derived position to check its features against a suitable probe, *v*. The remnant-DP raises to SpecCP and N moves up, assuming a raising analysis of relative clauses (2):

(2) a. [$_{DP}$ [$_{D}$ care] [$_{\varphi P}$ [$_{\varphi}$ o] [$_{N}$ mare]]]
which her sea

b. [$_{DP}$ mare [$_{D}$ a [$_{CP}$…[$_{D}$ care [φ ~~ϕ~~] [$_{N}$ ~~mare~~]]]…[$_{v}$ o vede]…[$_{DP}$ [$_{D}$ ~~care~~] [$_{\varphi P}$ [$_{\varphi}$ ~~ϕ~~] [$_{N}$ ~~mare~~]]]

With respect to the obligatoriness of resumption in relative clauses, Romanian patterns with Arabic. However, with respect to D-linked questions, Romanian and Arabic are different: resumption is obligatory in Romanian, but only optional in Arabic. This follows from my account because in Arabic the relative pronoun *illy* is different from the D-linked interrogative *ya*: the relative pronoun patterns with Romanian in that it requires obligatory resumption, while the D-linked interrogative is ambiguous between a [D-N] and a [D-φ-N] structure.

This account of resumption in Romanian has the advantage that it does not have to rely on special categories (i.e. Steriade's (1980) "shadow" pronouns) and also makes the right predictions regarding reconstruction effects in Romanian which are similar to those observed with resumption in Lebanese Arabic (Aoun et al 2001), Jordanian Arabic (Guilliot 2006; Malkawi 2009) and Iraqi Arabic (Sterian 2011).

Modeling aspectual asymmetries in the past and in the present

Benjamin Storme (MIT)

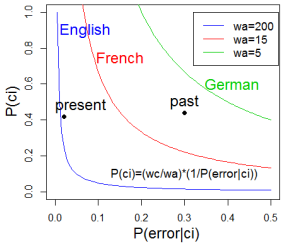
A number of studies have shown that languages have a richer aspectual morphology to express the semantic perfective/progressive distinction (e.g. *At 8 pm, I jumped* vs *At 8 pm, I was jumping*) in the past than in the present (e.g. Comrie 1976, Dahl & Bybee 1989).

	Distinction		Past		Present	
	Past	Present	Perfective	Progressive	Perfective	Progressive
English	**yes**	**yes**	I promised	I was promising	I promise	I'm promising
French	**yes**	no	j'ai promis	je promettais	je promets	
German	no	no	ich versprach		ich verspreche	

Table: Aspectual distinctions in the present asymmetrically imply aspectual distinctions in the past.

The only explicit model of this asymmetry (Malchukov 2009) builds on the hypothesis that perfective aspect and present tense are semantically incompatible universally. It follows that the perfective/progressive distinction can only be overtly marked in the past. However, this hypothesis is problematic because (i) perfective morphology and present tense morphology co-occur in English sentences with explicit performative verbs (*I promise to come*; Austin 1962) and in "reportive present" sentences (*Jones passes the ball to Smith*; Bennett & Partee 1978), and (ii) some languages without an overt perfective/progressive distinction in the present have been argued to have it covertly (Kratzer 1998, Bary 2012).

In this paper, we propose an alternative model where aspectual asymmetries across tenses are not built in the semantics, but result from a preference to neutralize a distinction in a context where there is a better disambiguation strategy available. In the present, it should be easier for a hearer to disambiguate between perfective and progressive in case of syncretism because the probability of a speaker uttering a present perfective logical form (LF) is very low (they can be uttered truthfully in very few contexts, e.g. with performative verbs).



This preference is modeled as resulting from the interaction of constraints on morphological complexity and semantic ambiguity (Jaeger 2007) in a Harmonic Grammar framework (Smolensky & Legendre 2006). Formally, the cost of having a morphological distinction between two meanings m_1 and m_2 (e.g. perfective and progressive) in a context c_i (e.g. past or present) is expressed as $cost_{complexity}(c_i) = w_C$, where w_C is a positive, language-specific weight. The cost of not having a morphological distinction between m_1 and m_2 in c_i is expressed as the probability of the hearer not guessing the meaning intended by the speaker in c_i multiplied by a positive, language-specific ambiguity cost w_A, i.e. $cost_{ambiguity}(c_i) = P(error|c_i)P(c_i)w_A$, with $P(error|c_i) = min\{P(m_1|c_i), P(m_2|c_i)\}$. This formulation assumes that a hearer will choose the most likely meaning as default in case of ambiguity. The probabilities $P(m_1|c_i)$, $P(m_2|c_i)$, and $P(c_i)$ are assumed to be drawn from the same probability distribution for all languages and are estimated based on frequencies in corpora (Josselson (1953) for $P(aspect|tense)$, Szagun (1978) for $P(tense)$). For a given language with weights w_C and w_A, it will be preferable (i) to have a morphological distinction in a given context c_i if $cost_{complexity}(c_i) < cost_{ambiguity}(c_i)$ and (ii) not to have it otherwise. Different values for w_A will yield different trade-offs, as represented by the three curves in the graph (w_C is set to 1). Points under a curve represent contexts with aspect syncretism, points above it represent contexts where the aspectual distinction is expressed. $P(error|present)$ being much smaller than $P(error|past)$, no language is predicted by the model to be able to have aspect syncretism in the past and not in the present. The typology can be derived without any hard constraint against present perfective LFs being needed.

Phonological and phonetic evidence for trochaic metrical structure in Standard Chinese

Yanyan Sui (Nankai University)

Background The metrical structure of words in Standard Chinese is very controversial. Various hypotheses have been proposed: 1) the word stress is final since for words in isolation the final syllables tend to be judged the most prominent (Chao 1968，Yip 1980, Hoa 1983); 2) tone determines stress assignment: a) syllables with tones are stressed, whereas toneless syllables are unstressed (Yip 1980, Yang Tso 1990, Duanmu 2007); b) tonal prominence affects stress assignment, syllables with the Falling tone are stressed, but the Low tone is unstressed (Meredith 1990, Chang 1992); 3) the morpho-syntactic aspects of words determine metrical structure (Duanmu 2007, Xu 1982). However, these hypotheses are primarily based on prominence judgment, which does not always faithfully reflect metrical structure.

Proposal Standard Chinese has a generalized trochee (Kager 1992) system with word-initial stress. Syllabic trochees are constructed cyclically in words; when syllabic trochees cannot be created monosyllabic bimoraic trochees are formed, but degenerate foot is prohibited.

Phonological Evidence Metrical structure interacts with other aspects of phonology, especially tone. The distribution of tones makes reference to metrical structure. Toneless syllables are restricted to unstressed positions, whereas stressed syllables require tones. Tones that undergo optional deletion in unstressed positions are maintained when stressed, Word[Ft(*tǐ* ***miàn~mian***)] 'decent' vs. Word[Ft(*tǐ tǐ*) Ft(***miàn*** *miàn*)] 'very decent'. And when a toneless syllable is placed in a stressed position as a result of a morphological process such as reduplication, a High-level tone is inserted, Word[Ft(*guī* ***ju***)] 'rule' > Word[Ft(*guī guī*)(***jū*** *jū*)] 'behaved'. Moreover, stressed syllables tend to align with strong metrical positions in the alignment of syllables (in lyrics) with rhythmic patterns (in music) in Chinese text setting. Metrical structure also plays a role in prosodic morphology. Infixation targets the unstressed position of words, Word[Ft(*hēi* ***-bu-***) Ft(*liū liū*)] 'dark and swarthy'. And the template of reduplication is metrically defined, *xīng* 'star' > Ft(*xīng xing*) 'star', hòu 'thick' > Word[Ft(*hòu hòu*)] 'very thick', whose targets are ($\sigma_{\mu\mu}\,\sigma_{\mu\mu}$) and ($\sigma_{\mu\mu}\,\sigma_{\mu\mu}$) respectively.

Phonetic Evidence Metrical structure affects the phonetic realization of tones and segments. Based on a corpus study of broadcast news speech in Standard Chinese (LDC98S73, LDC98T24), this study shows that tones and segments tend to be realized more closely to their articulatory targets in stressed syllables, but reduced in unstressed syllables. When stressed, High tones tend to be realized even higher, Low tones even lower, and Rising and Falling tones tend to have a steeper slope. Meanwhile, stressed vowels tend to be realized more peripheral in the F1/F2 vowel space than unstressed vowels.

Prominence Judgment vs. Metrical Structure Prominence judgment may not faithfully reflect metrical structure under the influence of a variety of factors, notably tone and final lengthening effect. Words with substantial final lengthening tend to be judged most prominent in the last syllables, and in terms of tone, syllables with the Falling tone and the High-level tone tend to be judged more prominent than those with the Low tone (Deng 2010).

Conclusion The systematic patterns in the distribution and the phonetic realization of tones and segments in words provide evidence for the trochaic metrical structure hypothesis for Standard Chinese. Meanwhile, it is necessary to distinguish metrical structure from prominence judgment, as prominence judgment is subject to the influence of a variety of factors, including tone and final lengthening effect.

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A syntactic [focus] feature maintains syntacto-centrism and the T-model while ensuring that prosody-information structure (IS) correspondences are maintained. However, the cartographic approach to the syntax of information structure (Rizzi 1997 and subsequent work) faces serious theoretical and empirical problems (e.g. xxx 2001, Adger and Svenonius 2011:12; Neeleman et al 2009). The alternative proposal entertained here dispenses with the syntactic [focus] feature and assumes a direct prosody-IS mapping:

(1) *Stress-focus correspondence*:

The focus of an utterance always contains the prosodically most prominent element of the utterance. (Reinhart 1995, 2006)

xxx 2015 (following xxx 2001) proposed a flexible theory of syntax-prosody mapping of 'clauses': intonational phrase boundaries correspond to the edges of the **highest syntactic projection whose head is overtly filled by the verb** or verbal material (e.g. auxiliary). Consider the following relevant schematic structures:

(2) a. ($_\iota$ XP V ... t_V ... t_{XP}) see (3)
b. ($_\iota$ XP ...($_\iota$ V … t_{XP})) see (4), (5)
c. ($_\iota$ V ...t_{XP} … XP) see (6), (7)

Hungarian left-peripheral focus movement is accompanied by verb movement (3).

(3) ($_\iota$ **[$_{FocP}$ Pétert**$_i$ szerette$_j$ [$_{PredP}$ meg t_j [$_{VP}$ Mari t_i]]**]**)
Peter.ACC loved Prt Mary
'It was PETER that Mari fell in love with.'

So, our analysis correctly predicts that the focus will occupy the leftmost (i.e. in Hungarian leftmost is most prominent) position of the intonational phrase, cf. (2a).

So-called topic movement in Hungarian, or the Bàsàá (Bantu) zero-coded passive left-dislocation, neither of which is accompanied by verb movement, gives rise to (2b). Our analysis predicts, correctly, that these topical elements sit outside the core intonational phrase:

(4) ($_\iota$ [$_{TopP}$ tòlò$_i$ ($_\iota$ **[$_{TP}$** síŋgâ$_j$ ì-ɲ-dʒÉ$_k$ [$_{vP}$ t_j t_k [$_{VP}$ t_k ɲÉ]]**]**]))
1.mouse 9.cat 9.AGR-PST1-eat 1.PRO
'The mouse, the cat ate it.' (= the mouse was eaten by the cat)

(5) ($_\iota$ [$_{TopP}$ A postást ($_\iota$ **[$_{PredP}$** meg-harapta [$_{VP}$ t_V a kutya]**]**]))
The postman PRT-bit the dog
'The dog bit the postman.'

Finally, a typological generalization with respect to right-peripheral focus positions follows from this flexible theory of the syntax-prosody mapping of clauses: **The position targeted by right-peripheral focus movement must be c-commanded by the overt position of the verb**, otherwise the moved focus would fall outside the core intonational phrase and thus could not receive main prominence. One example of such a construction is Italian right-peripheral focus movement:

(6) ($_\iota$ **[$_{TP}$** Non Ho [$_{VP}$ [$_{VP}$ presentato a nessuno] GIANNI**]**)
Not have-I Introduced to noone Gianni

Another is 'Heavy NP shift' e.g. English (Williams 2003):

(7) ($_\iota$ **[$_{TP}$** John T^0 [$_{VP}$ [$_{VP}$ gave t_{DP} to Mary] [$_{DP}$ all the money in the SATCHEL]]**])**

To the best of my knowledge, there are no other alternative explanations for this typological generalization, or counter examples to it.

Rethinking the semantics of English verb-particle constructions: The approach from the Theory of Lexical Concepts and Cognitive Models

Yukiyo Takimoto (Bangor University)

This paper addresses the semantics of English verb-particle constructions (VPCs) within the Theory of Lexical Concepts and Cognitive Models (LCCM Theory) developed by Evans (2009).

English verb-particle constructions are the combinations of verbs with spatial particles to behave like one verb. By way of illustration, let us consider the following examples:

(1) a. The economy is *picking up* b. They *picked up* their friendship
c. I've *picked up* a cold d. We've *picked up* a signal

All the examples from (1a) to (1d) involve the same VPC *pick up*. However, they appear to relate to a distinct sense associated with the VPC. Put another way, it seems that each use of *pick up* has to do with the depiction of the scene where the economy improves in (1a), the scene where two or more people resumed their friendship in (1b), the scene where the speaker caught a cold in (1c), and the scene where the speaker together with the other people detected a signal in (1d). Then, what kinds of mechanisms are working in the mind to differentiate among these meanings? Prior to such meaning-construction processes, how are these distinct senses stored in the mind?

In the previous studies (e.g., Lindner 1981; Morgan 1997), there has been no consensus as to how the meanings of VPCs are stored and processed in the mind. Therefore, this paper attempts to model the meaning-construction processes of VPCs along with their semantic networks focusing on *pick up* within one of the latest linguistic theories, LCCM Theory.

LCCM Theory is designed for better characterizing the protean nature of word meaning and assumes relying on work on cognitive psychology (e.g., Barsalou 1999) the bifurcation between the linguistic and conceptual system. According to the theory, utterance-level meanings (conceptions) are produced due to the interaction of the information in the linguistic system (lexical concepts) with the corresponding one in the conceptual system (cognitive models).

Based on the assumption of LCCM Theory, this paper posits that the interpretation of the overall VPC is produced as a result of the lexical concepts associated with a verb and particle affording access to the corresponding cognitive models. With regard to the semantic network, this paper predicts that the distinct senses associated with the same VPC are connected with each other in a way that shares a certain tendency with the historical development but are at the same time rearranged by each language user on the basis of their daily experiences (e.g., Grady 1997).

Reconsidering the semantics of VPCs within LCCM Theory might provide a useful insight not only into the better understanding of VPCs but also into capturing the relation between the linguistic and conceptual system in a more psychologically realistic way.

The form of argument structure under contact influence

Carola Trips (University of Mannheim), Richard Ingham (City University Birmingham) & Achim Stein (University of Stuttgart)

In this paper, an analysis is presented of language contact influence on verb argument structure (AS). We try to establish if and under which conditions the AS of a given language (model language) can be transferred to another language (replica language, cf Heine and Kuteva 2005). The focus lies on the contact situation between Old French (OF, model language) and Middle English (ME, replica language) from c. 1066 to c. 1400. The analysis is based on the assumption that AS is dependent on the Lexical Conceptual Structure of the verb (Levin and Rappaport Hovav 2005), e.g. for ME psych verbs we assume representations such as:

(1) a. *cwemen* 'please' [x CAUSE [BECOME [y STATE]]]
and *plesen* 'please' borrowed from OF [x CAUSE [BECOME [y STATE]]]
b. *liken* 'please' [STATE x,y]

It is hypothesised that in long-term intense language contact, not only borrowed verbs' argument structure may be influenced in the replica language but possibly also the ASs of native verbs. We assume that when speakers of the replica language borrow a verb from the model language they do this on semantic grounds, having a specific meaning 'in mind' (identical structures in (1) a. for *cwemen* and *please*, cf. Allen 1995). This meaning corresponds to a syntactic realisation proper to French. In English the semantic representation of the borrowed verb is maintained, and expressed e.g. by its frame of semantic roles.

On the syntactic level three possibilities exist: (a) if the structures in the model and replica languages match, no changes on the syntactic level will occur and the outcome will resemble lexical borrowing. An example is (Old)French *Il offre l'épée au roi* and English *He offers the sword to the king*. (b) In the case of a mismatch the structure of the model language is adapted to an existing structure of the replica language. This case can be evidenced by higher frequencies of this particular structure. An example is the preference for prepositional phrases (*to*+NP) over 'dative' NPs with *please* in ME: *please to God* instead of *please God*. (c) A mismatch can also lead to the adoption of a new structure in the replica language, as with innovative reflexive uses of native verbs in ME (Fischer 1992), such as *fear* and *wonder* in (2)a,b, on the model of OF, the latter evidenced with the borrowed verbs *dismay*, *annoy* in (2)c,d:

(2) a. a1393 Gower CA (Frf 3) 3.454: Men **feeren hem** in al the toun/wel more than thei don of thonder.
b. 1415 Doc.Conspir.Hen.V in D.K.R.43 591: Y **wondird me** swilche draghtis wer nought left.
c. c1300 SLeg.Inf.Chr.(LdMisc 108) p.26: Þo he no fond him nouȝt, he **demaiede him** sore.
d. c1450 Pilgr.LM (Cmb Ff.5.30) 41: Goode freend... **annye thee** nouht.

The third case implies a change of the grammatical system and is supposed to require a strong motivation, either due to social dominance and/or to the attractiveness of linguistic structure (for a discussion of these factors see e.g. Johanson:2002).

We will analyse the semantic and the syntactic side of the LCS of single verbs and relevant verb classes. Empirically, our approach based on the extensive lexicographical resources for this period as well as syntactically annotated text corpora like the *Penn-Helsinki Parsed Corpus of ME* and the SCRMF (srcmf.org) for OF.

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Pronoun copying and the copy theory of movement: Evidence from Dinka

Coppe van Urk (Queen Mary, University of London)

1. Summary: In this talk, I argue that pronouns may spell out copies of lexical DPs in a movement chain. In a wide range of constructions, including resumption, clitic doubling, *wh*-copying, and subject doubling, pronouns have been to shown to be capable of acting like full copies (e.g. Engdahl 1982, 1985; Koopman 1982; Aoun et al. 2001; Anagnostopoulou 2003; Holmberg and Nikanne 2008; Harizanov 2014). I propose that this happens because copies may undergo ***partial spell-out***, so that just the functional layer of a DP is realized. If pronouns are D heads without NP complements (Postal 1966; Elbourne 2005), this yields a pronoun.

2. *Kê*-copying: I motivate and develop the partial spell-out analysis with a novel pronoun copying pattern from Dinka (South Sudan; Nilotic). In Dinka, Ā-movement of a plural DP leaves a 3rd person plural pronoun *kê(ek)* at every *v*P edge that lies on the path of movement:

(1) **Ye kɔ̂ɔc-kó** yíi Bôl [$_{vP}$ **kê** luéel ɛ̈ cï̈i Áyèn [$_{vP}$ **kê** tî̈iŋ]]?
Q **people-which** HAB.OV Bol.GEN **3P** say.NF C PRF.OV Ayen.GEN **3P** see.NF
'Which people does Bol say Ayen has seen?'

This is movement-derived: *kê*-copying is island-sensitive and shows reconstruction (2).

(2) **Ròth-kén$_i$** áa-yü̱ü̱k **kê** luéel [$_{CP}$ ɛ̈ nhiárkɛ̈$_i$ **kêek**].
self-PL.3PL 3P-HAB.1PL **3PL** say.NF C love.3PL **3PL**
'Themselves, we say that they love.'

Kê-copying is a reflex of intermediate movement through *v*P. Subjects, for example, do not show *kê*-copying at the local *v*P edge, but do trigger it at higher *v*P edges:

(3) **Ye kɔ̂ɔc-kó** yü̱ü̱k [$_{vP}$ ***(kê)** tàak, [$_{CP}$ càm [$_{vP}$ **(*kê)** cuî̱n]]]?
Q **people-which** HAB.1PL **3PL** think.NF eat **3PL** food
'Which people do we think are eating food?'

Additional arguments that this is pronoun spell-out of a copy include: copied pronouns are free-standing, show the same variation in form as pronouns, and appear where no DP can.

3. Matching asymmetries: *Kê*-copying is person-insensitive and only matches in plurality:

(4) **Wɔ̂ɔk** cï̈i Bôl [$_{vP}$ **kêek** tî̈iŋ].
1PL PRF.OV Bol.GEN **3PL** see.NF
'Us, Bol has seen.'

(5) **Wêek** cï̈i Bôl [$_{vP}$ **kêek** tî̈iŋ].
2PL PRF.OV Bol.GEN **3PL** see.NF
'You all, Bol has seen.'

Similar patterns of number matching occur in other pronoun copying constructions, such as island-sensitive resumption in Nupe (Kandybowicz 2007), and subject doubling in Finnish and Tunisian Arabic (Holmberg and Nikanne 2008; Jlassi 2013). A broad survey of matching across pronoun copying constructions (i.e. resumption, *wh*-copying, clitic doubling, subject doubling and intermediate pronoun spell-out as in Dinka) reveals the implicational hierarchy in (6).

(6) **Matching hierarchy:** Case → Person → Number. (If a copied pronoun matches in case, it matches in person. If it matches in person, it matches in number.)

4. Partial spell-out: The mismatches evident in (5) and described by (6) motivate an analysis in which copied pronouns can be sensitive only to a subset of the features of the full DP. In Dinka, the sensitivity of pronoun copying to plurality mirrors a general morphosyntactic asymmetry: across paradigms, [plural] is marked by *k(e)*, but [singular] has no cross-paradigmatic marking.

I propose that Dinka *kê*-copying reflects the realization of just the ***subpart*** of a copy responsible for encoding number. I implement the hierarchy in (6) as the sequence of heads in the DP domain (i.e. [$_{KP}$ K [$_{PersP}$ Pers [$_{NumP}$ Num NP]]]). Pronoun copying and the generalization that govern it then derive from two ingredients: (i) **obligatory NP deletion** (which I derive from a particular view of how deletion proceeds at PF), and (ii) the idea that Spell-Out applies to **maximal projections**. This yields three options, which represent copied pronoun with the three levels of matching in (6): spell-out of NumP, PersP, or KP.

Practice with pronouns: Acquisition of differential object case-marking in Estonian

Virve Vihman, Elena Lieven & Anna Theakston (University of Manchester)

Variation in object marking within a language provides a challenge for the child acquiring the system. In Estonian, differential object marking is a crucial puzzle for the language learner to solve. Transitive verbs in Estonian can be classified as (a) partitive verbs, which only take partitive objects, and (b) aspectual verbs with alternating object (O) case. Morphologically, O can be realised as PARtitive, GENitive or NOMinative (the latter two marking affected, bounded O in different contexts), and O case involves a combination of lexical, semantic and syntactic considerations. This talk investigates the role of pronouns in acquisition of the patterns of O case marking, drawing on naturalistic data from one mother-child pair.

GEN case occurs in clearly defined contexts, marks prototypical transitivity, and has been taken to realise structural accusative case by generative linguists (Caha 2009, Norris 2014), whereas PAR is seen to be semantically and lexically governed. PAR case is used in a wider variety of contexts: some verbs accept *only* PAR O, and *all* verbs take PAR O under negation. How do children mark verb objects in the early stages of producing transitive clauses? Constructivist accounts predict that the O case forms would initially be lexically restricted and conditioned by particular constructions (Childers & Tomasello 2001; Theakston et al. 2013), and, based on the greater morphological salience and frequency of PAR O in the input, constructivists will also predict more accurate early usage of PAR as an O marker, whereas generativists predict the generalised use of GEN O as a structural O marker.

We investigated the use of the three object cases in one child's and his caregiver's speech. Our data consist of 3796 transitive utterances (balanced between speakers), extracted from dense recordings at 2;0.01–2;1.12 (MLU in words: 1.99–2.94). We focus on pronominal objects, as the majority of nouns are used by the child infrequently, in only one case form.

One third of transitive utterances in the child-directed speech (CDS) have null O: object ellipsis is grammatical in Estonian, hence no overt argument is required for realising a transitive argument. Yet the child uses nearly four times as many pronominal O as his mother (194 in child data; 53 in CDS), and 94% are forms of the 3sg inanimate pronoun 'it' (NOM: *see*; PAR: *seda*; GEN: *selle*), whereas this pronoun accounts for only 60% of pronominal O in CDS. When MLU in words is over 2.0, the child uses 'it' in all three grammatical cases.

Far from being a placeholder, the 3sg pronoun seems to act as a testing ground for the child's emergent system. Rather than generalising one case as an object marker, the child generalises the alternating pattern across verbs. The most frequent verbs show alternating object case in the child's speech, including two partitive verbs, *look* and *want,* with which the caregiver uses only PAR case. Four more verbs are used by the child with alternating pronominal case but more restricted use with lexical nouns. This suggests that the child has some knowledge of the alternation in object case, and tests the conditions of alternation with a word he knows in all three morphological forms. Reasons why the child goes beyond the input will be discussed according to differing theoretical approaches.

Unaccusativity and low imperative subjects: the view from Scots

Andrew Weir (Ghent University)

I investigate low positions of imperative subjects in Scots. All speakers allow a subject in the canonical preverbal position, but some also allow a postverbal position, as illustrated in (1).

(1) a. Come you over here! b. Run you to the shops!
c. Stop you looking at me like that! d. Listen you to me!

However, not all verbs allow low subjects in imperatives; structures like (2) do not appear.

(2) a. *Read you that book! b. *Eat you your dinner!

This resembles the 'Belfast A' dialect of Henry 1995, who argues that low imperative subjects occur with unaccusatives; assuming that imperatives lack a EPP [Spec, TP] position, the subject can stay low (it can also optionally raise to a preverbal position, Rupp 2007). However, *listen* (1d) is not a canonical unaccusative; and in addition, an verb like *talk* does allow a low subject, but only if it takes a PP complement (3a). This subject position is not allowed with a PP adjunct (3b).

(3) a. <You> talk <you> to me! b. <You> talk <*you> about your day!

Similar facts were noted for Belfast A by Henry; (1b) is well-formed, but **run you in the park* is not grammatical in either Scots or Belfast A. The complement of the verb therefore seems crucial. I argue that the key distinction is whether the verb embeds a predicate with its own external argument. I propose that in Standard English, the subject of verbs like *stop* is merged as an external argument and controls a PRO subject in the embedded vP, but in the Scots dialects of interest, *stop* can optionally fail to project its own external argument (that is, an unaccusative v rather than an agentive v* can be merged in); the subject of the embedded vP can raise to the matrix subject position. We therefore maintain Henry's insight that low imperative subjects correspond to a lack of external argument (=unaccusativity) for the main verb; but I locate the low subject as the external argument of an embedded predicate, rather than an internal argument of the main verb.

(4) John stopped smoking.
a. [$_{TP}$ John$_i$ [$_{vP}$ t$_i$ v* [$_{VP}$ stop [$_{vP}$ PRO$_i$ v* [$_{VP}$ smoking]]]]]
b. [$_{TP}$ John$_i$ [$_{vP}$ v [$_{VP}$ stop [$_{vP}$ t$_i$ v* [$_{VP}$ smoking]]]]]

The contrast between raising and control parses is difficult to discern in declaratives. However, in imperatives, we can observe the subject remaining in its base position: inside the embedded predicate in the Scots dialects, in external argument position in Standard English.

(5) a. Stop you looking at me! (Scots) b. You stop looking at me! (StdE)
[$_{CP}$ [$_{vP}$ v [$_{VP}$ stop [$_{vP}$ you looking at me]]]] [$_{CP}$ [$_{vP}$ you v* [$_{VP}$ stop [$_{vP}$ PRO looking at me]]]]

Beck (2005) a.o. analyses goal PP complements as complex predicates containing PRO as an external argument; again, I argue that in Scots, external arguments of PPs are not controlled, but rather raise to the matrix subject position. If a verb has a PP complement (in Scots), unaccusative v is available; in (6b) *John*'s θ-role is assigned within the PP, rather than within the vP.

(6) John ran to the shops.
a. [$_{TP}$ John$_i$ [$_{vP}$ t$_i$ v* [$_{VP}$ ran [$_{PP}$ PRO$_i$ [$_{PP}$ to the shops]]]]
b. [$_{TP}$ John$_i$ [$_{vP}$ v [$_{VP}$ ran [$_{PP}$ t$_i$ [$_{PP}$ to the shops]]]]

Structures like (1b) are therefore possible in Scots because the subject can remain PP-internal. I argue that θ-roles are assigned to external arguments even of non-goal PP complements in Scots, including e.g. complements of *listen* and *talk*; these verbs are compatible with unaccusative v and imperative subjects can remain low, within PP (1b, 3a). External arguments are not projected in PP adjuncts, however; when verbs like *talk* have no PP complement, as in (3b), I argue that v* is available and the external argument is base-merged in v*P, resulting in an obligatory high subject.

On the history of V to C in Romance

Sam Wolfe (University of Cambridge)

The Medieval Romance languages are frequently analysed as showing verb-second (V2) effects, derived through V-to-C movement and merger of a pragmatically salient constituent into the C-layer (Roberts 1993; Vance 1997; Benincà 2006; Poletto 2014). The present paper sketches a potential analysis of how these syntactic properties evolved and how they were lost, drawing on a new comparative corpus of Medieval Romance texts.

In Classical Latin, V1 orders involving topic continuity, contrastive and wide focus, different polarity values and imperatives are extensively attested (Devine & Stephens 2006, Bauer 2009), involving verb-movement to C_{Top}, $C_{Foc,}$ C_{Pol} and C_{Force} respectively as a marked word order alternative. Based on a study of the 4th century *Peregrinatio*, we propose that in late Latin this discourse-marked verb fronting has been reanalysed as unmarked verb-movement to C_{Fin} in all matrix clauses. When accompanied by optional topicalisation or focalisation this yields incipient V2 structures (1), yet this additional constituent fronting is not yet obligatory (Salvi 2004; Clackson & Horrocks 2007; Ledgeway 2012):

(1) Et omnem ipsam allocutionem perleget episcopus
And all.ACC that.ACC address.ACC read.3SG bishop.NOM
'And the bishop reads all that address'

This ($XP_{Topic/Focus}$)-V-(S)-(O) syntax is retained in 11th century Sardinian texts (Lombardi 2007, Wolfe 2015) and also in 10th century texts from the Iberian Peninsular (Wright 2014).

In Early Old French, Spanish, Sicilian and Occitan previously optional topicalisation or focalisation is reanalysed as obligatory and the languages show a clear V2 syntax (2):

(2) Ma quillu templu avia issu factu edificari
but that temple have.3SG.PST he do.PTCP build.INF
'But he had had that temple built…' (Old Sicilian)

Here the features responsible for V2 effects (an Edge Feature and Phi-Probe) are held on a low C-head, $C_{Fin.}$ Frame-Topic-Focus projections in the CP are 'multiply accessible' in the terms of Benincà (2004) yielding widespread V3 and V4 orders (3) and null elements moving to the Topic layer can satisfy V2 through movement via SpecC_{Fin}P yielding marked V1 orders featuring Null Shift Topics (Frascarelli & Hinterhölzl 2007) (4):

(3) Illi, per amor del Senhor, lur=lavava los pes
he for love of-the Lord them=wash.3SG.IMPV the feet
'He washed their feet because of his love for the Lord' (Old Occitan)

(4) Tient l' olifan
hold.3SG the Oliphant…
'He holds the Oliphant…' (Early Old French, Labelle 2007)

In the later Old Spanish, Old French and Old Venetian texts from the 13th century, by contrast, preverbal Topics and Foci do not co-occur at all, V4 accounts for less than 1% of matrix clauses and V3 can only co-occur with a Frame-setter (Giorgi 2010) (5):

(5) en q(ue)sta eli se=com(en)çà menar l'un l'autro
in this they REFL=begin.3PL.PST threaten.INF each other
'And at this moment they began to threaten each other' (Old Venetian)

V1 is also distinct, failing to occur at all in later Old French and being restricted to discourse-initial position with *verba dicendi* in later Old Spanish. We analyse this following Zwart (1997) as involving a null discourse operator in SpecC_{Force}P. To account for these characteristics, we propose that in these varieties a further reanalysis has taken place, where the locus of V2 effects is C_{Force}, high in the C-layer.

Unmarked V-to-C movement has now been lost in all but certain Rhaeto-Romance languages (Poletto 2002). V-to-C_{Pol} and C_{Force} in polar questions and imperatives, however, remains an option to the present day. We reanalyse the resistance of these two clause-types to change as a result of their salience in acquisition input (Westergaard 2007).

Phonological representations of compounds in non-native speech production

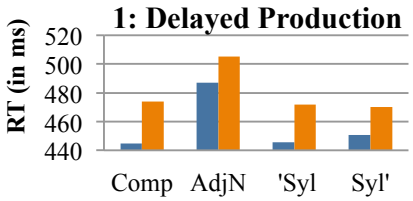
Hilary Wynne (University of Oxford), Linda Wheeldon (University of Birmingham) & Aditi Lahiri (University of Oxford)

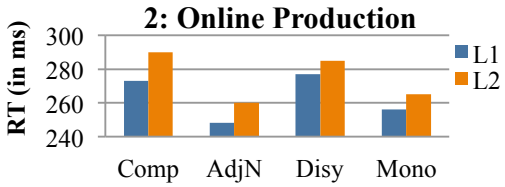
It has been argued that speech production involves the generation of a series of representations during different processing stages (Levelt, 1989). The phonological encoding stage receives abstract lexical representations and infuses them with phonological features. Theories of phonological phrasing (e.g. Selkirk 1978, 1981, 1986; Nespor & Vogel 1986; Lahiri & Plank 2010) assume that prosodic units are not isomorphic with syntactic units. However, theories are not transparent about the prosodic status of compounds: although a noun-noun compound in English consists of two lexical words (and therefore two prosodic words), it can also act as a single prosodic item by exhibiting main stress on the first unit and carrying inflection. Thus the question remains controversial - should these items be treated as a single prosodic unit, similar to a monomorphemic word, or as two distinct units for the purpose of post-lexical representation? Recursive word formation may suggest that compounds are a single unit. Psycholinguistic evidence measuring speech onset latency in native speakers of Dutch and Portuguese also shows compounds being treated as single prosodic units (Wheeldon & Lahiri 1997, 2002; Vigario, 2010).

Although recent studies have produced evidence for the prosodification of compounds in native speakers, little is known about the process in non-native speakers. Our research question is as follows: do non-native fluent speakers of English treat compounds as single or separate units for the purpose of phonological encoding? To examine this we conducted two tasks containing four sets of English stimuli: noun-noun compounds, adjective-noun phrases, disyllabic initial-stressed words, and disyllabic final-stressed words (monosyllabic in Experiment 2).

Comp	**AdjN**	**'Syl**	**Syl' (Mono)**
graveyard	green yard	gravel	gazelle (gut)

Speaker groups consisted of 24 native British English speakers (L1) and 24 native Bengali speakers who had English as their second language (L2). Experiment 1 presented a delayed priming task, in which speakers were told to answer a question ("*What was it*?") after three beeps, using the word/phrase they saw on the screen. Experiment 2 instructed subjects to begin speaking immediately after the question. Based on earlier experiments, we predicted that, if compounds were treated as single units, latencies in Experiment 1 would be similar to those in the monomorphemic word conditions. Additionally, we predicted that the size of the first prosodic unit would have an effect in Experiment 2, resulting in shorter latencies in the adjectival phrase condition. Our results are illustrated below.





In Experiment 1, both subject groups exhibited significantly longer mean naming latencies for the phrases (2), with compounds (condition 1) showing no difference to either disyllabic word condition. In Experiment 2, both groups showed significantly shorter latencies for the phrasal condition (2), statistically similar to the monosyllabic word condition (4). Compounds produced the longest latencies, similar once again to the disyllabic word condition. Together, these results suggest that, when given time to prepare an utterance, non-native English speakers will plan and encode prosodically-shaped units for articulation. When speakers under time pressure to produce a response, however, speech latencies only reflect the size of the first prosodic unit.

Mandarin dou as a pre-exhaustification operator: Quantification and free choice

Yimei Xiang (Harvard University)

The Mandarin particle *dou* has various uses: it can serve as a universal ($\forall$)-quantifier when associated with a non-*wh*-item, as in (1); it can also license the free choice (FC) use of a *wh*-item, as in (2). We argue that both uses can be captured by analyzing *dou* as a pre-exhaustification operator.

(1) A he B **dou** jiehun -le.
A and B DOU get-married -ASP
'A and B both got married.'

(2) Shui *(**dou**) qu -guo.
Who_{FCI} DOU go -ASP
'Anyone/everyone has been there.'

We adopt Xiang's (2008) idea that *dou* introduces exhaustivity, but more precisely define *dou* as a presuppositional *pre-exhaustification operator* (cf. Chierchia 2013), as in (4): (i) it presupposes that its prejacent has some excludable pre-exhaustified alternative (notation: $\mathscr{E}xcl_{\text{O}}(p)$, defined in (3)); (ii) it affirms the prejacent and negates all the excludable pre-exhaustified alternatives.

(3) $O(p) = p \wedge \forall q \in \mathscr{A}lt(p)[p \not\subseteq q \rightarrow \neg q]$; $\quad \mathscr{E}xcl_{\text{O}}(p) = \{O(q) : q \in \mathscr{A}lt(p), q \neq p, p \not\subseteq O(q)\}$

(4) $\mathbf{dou}(p) = \exists q \in \mathscr{E}xcl_{\text{O}}(p).\ p \wedge \forall q \in \mathscr{E}xcl_{\text{O}}(p)[\neg q]$

The presupposition predicts the absence of collective reading in (1): only if "A and B" is analyzed as a generalized quantifier, the prejacent of *dou* has excludable pre-exhaustified alternatives (as underlined in (5d)). Next, applying *dou* to the distributive reading yields the $\forall$ use, as in (6).

(5) A and B **dou** got married.

		Distributive:	Collective:
a.	$[\![\text{A and B}]\!] =$	$a \cap b$ (i.e. $\lambda P.P(a) \wedge P(b)$)	$a \oplus b$
b.	$\mathscr{A}lt([\![\text{A and B}]\!]) =$	$\{a \cap b, a, b\}$	$\{a \oplus b\}$
c.	$[\![\text{A and B got married}]\!] =$	$f(a) \wedge f(b)$	$f(a \oplus b)$
d.	$\mathscr{A}lt([\![(5c)]\!]) =$	$\{f(a) \wedge f(b), \underline{f(a), f(b)}\}$ $\surd$	$\{f(a \oplus b)\}$ $\times$

(6) $[\![\ \mathbf{dou}\ [\text{A and B got married}]]\!] = [f(a) \wedge f(b)] \wedge \neg Of(a) \wedge \neg Of(b) = f(a) \wedge f(b)$

Following Chierchia (2013), we assume that the FCI *who* is an $\exists$-indefinite with a [D] feature. [D] activates the D(omain)-alt(ernative)s (7a-ii) and must agree with an exhaustivity operator. Let $D = \{a, b\}$, the D-alts grow into (7b-ii). In absence of *dou*, [D] is checked by a regular O_D, which negates the proper D-alts, yielding a contradiction to the assertion and making the FCI un-licensed, as in (7c). Assessing [D] with *dou* avoids the contradiction and yields a $\forall$-FCI reading, as in (7d).

(7) a. (i) $[\![\text{who}_D]\!] = \lambda P.\exists x \in D[P(x)]$ | (ii) $\mathscr{A}lt([\![\text{who}_D]\!]) = \{\lambda P.\exists x \in D'[P(x)] : D' \subseteq D\}$
b. (i) $[\![\text{who}_D\ \text{came}]\!] = f(a) \vee f(b)$ | (ii) $\mathscr{A}lt([\![\text{who}_D\ \text{came}]\!]) = \{f(a) \vee f(b), f(a), f(b)\}$
c. $[\![O_D\ [\text{who}_D\ \text{came}]]\!] = [f(a) \vee f(b)] \wedge \neg f(a) \wedge \neg f(b) = \bot$
d. $[\![\mathbf{dou}_D\ [\text{who}_D\ \text{came}]]\!] = [f(a) \vee f(b)] \wedge \neg Of(a) \wedge \neg Of(b)$
$= [f(a) \vee f(b)] \wedge \neg[f(a) \wedge \neg f(b)] \wedge \neg[f(b) \wedge \neg f(a)]$
$= [f(a) \vee f(b)] \wedge [f(a) \leftrightarrow f(b)] = f(a) \wedge f(b)$

Since (7d) contradicts to the scalar implicature (SI) $\neg[f(a) \wedge f(b)]$, we predict that *dou* alone cannot license FCIs with obligatory SIs. As Giannakidou & Cheng (2006) observe, *dou* cannot license a singular *which*-NP without a modal, as in (8). We argue that the singular *which*-NP has a $[\sigma]$ feature, obligatorily activating an SI, and that the contradiction between the $\forall$-reading and the SI can be avoided iff $[\sigma]$ is assessed under a modal, as in (9a).

(8) [Na-ge nanhai]$_{D,\sigma}$ dou *(keyi) hejiu.
Which-CL boy DOU can drink
'Every/any boy can drink.'

(9) a. $\mathbf{dou}_D \Diamond O_\sigma$ [[which boy]$_{D,\sigma}$ drink]
b. $\bot$ $\mathbf{dou}_D\ O_\sigma$ [[which boy]$_{D,\sigma}$ drink]
c. $\bot$ $\mathbf{dou}_{D,\sigma}$ [[which boy]$_{D,\sigma}$ drink]

Chierchia G. 2013. *Logic in Grammar.* **Giannakidou A. & L. Cheng. 2006.** (In)Definiteness, polarity, and the role of *wh*-morphology in FC. **Xiang M. 2008.** Plurality, maximality and scalar inferences: A case study of Mandarin *dou*.

On the classification of Japanese head-internal relative clauses

Keisuke Yoshimoto (Kansai Gaidai University)

This paper argues that Japanese head-internal relative clauses (HIRCs) have different structures depending on the matrix predicates that select them. Despite the same meaning, Japanese has head-external relative clauses (HERCs) (1) as well as HIRCs (2) with the differences lying in the underlined head positions and in the nominalizer *–no*.

(1) John-ga [$_{NP}$ [e$_i$ nigeteiku] <u>doroboo$_i$</u>]-o tukamaeta. (HERC)
John-nom run.away thief-acc caught.

(2) John-ga [$_{NP}$ <u>doroboo</u>-ga nigeteiku no]-o tukamaeta. (HIRC)
John-nom thief-nom run.away *no*-acc caught
'John caught the thief$_i$ as he$_i$ was running away.'

Previous analyses of HIRCs vary with some researchers arguing there is no external head (Kuroda 1992, 1999, Hiraiwa 2012) and others assuming the external head to be pro (Kitagawa & Ross 1982, Hoshi 1995) or assuming abstract movement (Watanabe 1992). This movement analysis, however, has been criticized as HIRCs do not show island sensitivity (Kuroda 1999) and do not have the same LF representation as HERCs that typically involve movement (Shimoyama 1999). In contrast to those who analyze HIRCs as complements, Mihara (1994) argues that they are adverbials, but this cannot account for the fact that they can be passivized and assigned a case particle. Unlike the previous accounts that assume the same structure for every HIRC, I adopt a mixed view according to which their structure is either with a pro as external head referring to the internal head, or no external head at all depending on the selecting predicates and the case particle they assign. The types of matrix predicates are divided into four as follows: (A) most transitive verbs that assign the accusative case particle *–o* to its object (e.g. catch, help), (B) two or three-place transitive verbs that assign the dative case *–ni* to its *goal* object (e.g. give, overtake), (C) some perception and cognition verbs that take situation as their complement and assign the accusative case *–o* to it (e.g. watch, dream), (D) verbs representing encounter that take situation as their complement and assign the dative case particle *–ni* to it (e.g. meet, come across). The existence of the external head can be tested by (i) selectional restriction, (ii) Condition B, and (iii) clefting.

Argument (i). A verb restricts what kind of object it takes (e.g.*John-ga kemuri-o tukamaeta. 'John caught the smoke') but it cannot restrict an argument across a clause boundary. So if there were an external head, it would be restricted by the selecting verb; otherwise it would not. The following data illustrate that only type (A) and (B) HIRCs have an external head.

(A) * John-ga [$_{NP}$ [kemuri$_i$-ga detekuru] pro$_i$ no]-o tukamaeta.
John-nom smoke-nom come.out pro *no*-acc caught
'Lit. John caught the smoke coming out.'

(B) * John-ga [$_{NP}$ [kemuri$_i$-ga detekuru] pro$_i$ no]-ni oituita.
John-nom smoke-nom come.out pro *no*-dat overtook
'Lit. John overtook the smoke coming out.'

(C) John-ga [$_{NP}$ kemuri-ga detekuru no]-o kansatusita.
John-nom smoke-nom come.out *no*-acc watched
'Lit. John watched the smoke coming out.'

(D) John-ga [$_{NP}$ kemuri-ga detekuru no]-ni dekuwasita.
John-nom smoke-nom come.out *no*-dat encountered
'Lit. John encountered the smoke coming out.'

Argument (ii). If there is a pronominal external head in all HIRCs, it cannot refer to the antecedent within the same matrix domain due to Condition B. My data suggest that type (A) and type (B) HIRCs *do* have an external head that I analyze as pro while type (C) and (D) do not. **Argument (iii).** If there is an external head in all HIRCs, it can be in the focus position of cleft sentences. The data from clefting strengthen my point that type (A) and (B) HIRCs have an external head while type (C) and (D) do not.

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