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Abstracts booklet

**School of Oriental and African Studies**  
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# **Theticity in French and Spanish spontaneous speech: a quantitative corpus study**

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This paper presents the results on the annotation of topicality and theticity, conducted as part of the *sgs* annotation project (Adli, 2011). The data consists of recordings of 52 Spanish speakers from Catalonia (13 hours of speech) and recordings of 101 French speakers from Paris (26 hours of speech). We used a methodology that elicited a high number of question-answer sequences, which are insightful for information-structural analyses: Subjects were asked to resolve a fictive criminal case together with the interviewer.

We have annotated all topic chains in the entire French and Spanish data. We confronted two major challenges that will be laid out in the talk: First, we had to develop an annotation procedure that covered non-canonical topic-comment structures, such as topicality of indefinites (Endriss & Hinterwimmer, 2010), embedded topics (Bianchi & Frascarelli, 2010), ellipticals or non-assertive speech acts, in particular interrogatives.

Second, we devised an annotation procedure for thetic sentences for both languages. Building on the standard assumption that thetic constructions are topicless, an adequate analysis of theticity is a key element in the identification of topic chains. Our notion of theticity builds on Marty (1965) and Kuroda (1972, 1992). Furthermore, we state that certain utterances in spontaneous speech are topicless without that they enter this notion of theticity. We annotated the syntactic form of each thetic sentence, distinguishing for example between split constructions, existential sentences, and answers to explicit or implicit all-focus-questions. In addition, we annotated - inspired by Sasse (1987, 2006) - different functions of theticity, such as questioning, description, or explanation.

After the presentation of our annotation procedure we will discuss our quantitative results based on more than 7000 thetic sentences, comparing Spanish and French, in order to capture syntactic properties of thetic constructions. The findings confirm that languages make use of different constructions: For example, French uses unlike Spanish split constructions, and French relies more often than Spanish on existential constructions. We will also analyze the grammatical and referential properties of the subject in thetic sentences.

In a next step, we will discuss the role of thetic sentences for topic continuity. We deal with the question as to whether a topic following a thetic construction shows properties of a familiar (same-reference) topic or properties of a shift (switch-reference) topic (Keenan, 1976). We use the expression of null versus overt subject pronouns in Spanish as a diagnostic tool, building on research by Frascarelli (2007) for Italian: Familiar topics are more often expressed as null subjects while shift topics are more often realized as overt pronouns. Interestingly, the results show that - at least with regard to pronominalization - there is no particular effect of theticity on the following topic.

Finally we will lay out future directions that we consider as promising in the research of theticity, such as prosodic analyses of thetic all-focus structures.

## **Bridging the gap: modelling the socio-phonological interface**

**Jennifer Amos**  
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It has been observed that ‘work on phonological variation has continued largely independently of phonological theory, often consciously emphasising its empirical character’ (Anttila 2002:214). This has led to a number of sociolinguistic studies focussing particularly on questions such as ‘what type of variation occurs when?’ and ‘how is this variation/change motivated by external social practices?’, as opposed to ‘why does this linguistic variation occur?’ and ‘how is this variation/change motivated by internal linguistic influences?’.

Conversely, while attempts have been made to reconcile variation and change within, for example, phonological literature, the results have led to models which are able to emulate specific data sets or predict variation based on statistical probability, but not models which can reflect variation that is a result of dynamic social conditions (such as changes in style and interlocutor etc.).

This presentation will examine these issues and discuss the formulation of a three-tiered integrated socio-phonological model. Using the mechanics of Dispersion Theory (Flemming 2004, 2006), as a means of maintaining the integrity of the underlying phonemic system, and Optimality Theory (Prince and Smolensky 1993, 2004) in order to derive surface variants, internal linguistic influences on variation and change will be modelled. The outputs from these levels, together with other possible surface variants (such as those acquired via the ambient speech environment), are then related to real sociolinguistic data and shown to have sociolinguistic associations that influence which form is ultimately selected as the surface form.

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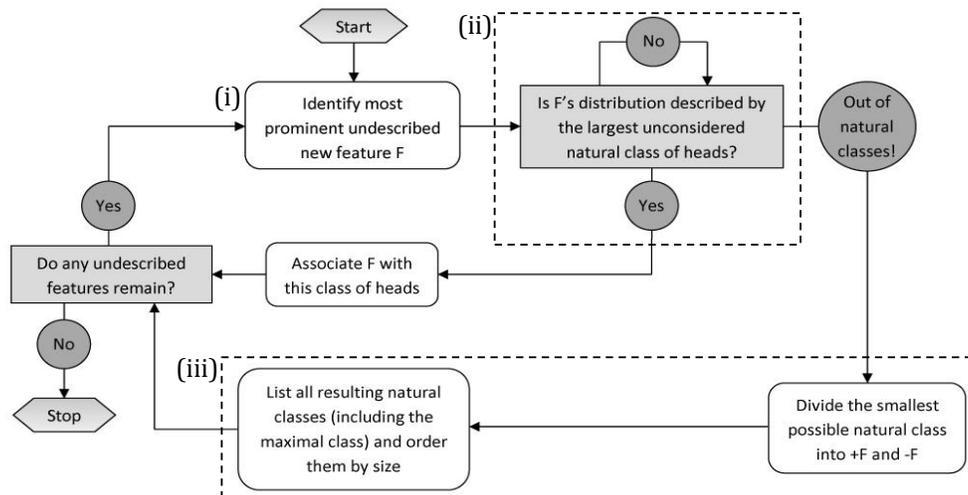
# An algorithm for lexicocentric parameter acquisition

Timothy Bazalgette  
University of Cambridge

Under the lexicocentric view of syntax (c.f. Baker 2008’s “Borer-Chomsky conjecture”) parametric variation is viewed as simply involving differences in the features of lexical items, with the properties of FLN (e.g. Merge, Agree) being invariant. This is an attractively minimalist perspective, but as Roberts and Holmberg (2010) note, it predicts unconstrained microvariation of a multitude of independent parameters, making it difficult to explain e.g. diachronic stability of macroparameters, and implicational relationships between parameters, as well as placing a large burden on the acquirer. Following Roberts (2007), they propose this tension between descriptive and explanatory adequacy may be resolved using the notion of generalisation of the input – the learner systematically tries to quantify features over the largest possible class of heads, leading to emergent hierarchies of microparameters.

While this goes some way towards resolving the tension, Biberauer (2011) and Branigan (2012) both note that the top-down nature of the resulting hierarchies is susceptible to superset traps (c.f. Berwick 1985), and suggest a potential resolution: categories are not necessarily pre-given by UG, meaning that at different stages of development, different sets of categories are available to quantify over.

The below algorithm provides a computational model that interprets both of these insights from a radically minimalist perspective, providing a general and potentially non-domain-specific system that could underlie featural acquisition:



In (i), a specific feature attested in the data is chosen to be described. Process (ii) then attempts to assign this feature to a natural class that is already in the system, working through them from largest to smallest – it is this step that generates the Roberts and Holmberg (2010) style hierarchies. If, however, no natural classes match the distribution of the feature in question, then process (iii) creates new natural classes to describe the featural distribution seen, which can in turn be made reference to in process (ii) in subsequent loops of the algorithm, with the whole process looping until all properties are described.

This has the overall effect of taking a multiset of items, each of which has a number of associated properties (the characterisation of the linguistic input), and from this constructing a categorial system that provides a structured linguistic representation of these properties. This is demonstrated using a toy fragment of English consisting of 18 lexical items, which uncovers a number of advantageous properties of the algorithm, such as the distinction it makes between distinctive categorial features and privative syntactic features (e.g. +N vs. uPhi), and its ability to apply equally well in phonological and lexical domains, as well as retaining the advantages of the Roberts and Holmberg (2010) approach. It is thus argued to be a good candidate for a third factor system in the sense of Chomsky (2005).

## A case of grammatical reanalysis: disjunction to question particle

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There is synchronic evidence that the polar question particle in some languages is historically derived from a disjunctive element meaning ‘or’, ‘not’, or sometimes ‘or not’, consistent with the pathways of grammaticalisation described by Heine & Kuteva (2002). This evidence consists in the behaviour of such particles: they are unable to signify negative questions, as shown in (1), *wh*-questions, and alternative questions, all of which are incompatible with the particle if it has a disjunctive meaning:

- (1) \*nát mây khàp rót mǎy/ máy [Thai]  
Nath NEG drive car Q  
(Intended: ‘Doesn’t Nath drive a car?’) (Somphob Yaisomanang, p.c.)

However, there are some languages which appear (from a phonological point of view) to share this derivation, but in which the particle is not so restricted in terms of where it can appear (it is still forbidden in *wh*-questions in these languages, for independent reasons):

- (2) Amerika’ya gitmedin mi? [Turkish]  
to.America go.NEG.PAST.2 Q  
‘Haven’t you visited America?’ (Olçay Sert, p.c.)

The explanation I offer for this is that in (2), the particle has undergone reanalysis from a less functional to a more functional element (Roberts & Roussou 2003) and is now a ‘true’ question particle, whereas in (1) the particle retains its disjunctive characteristics. The syntax of polar questions is therefore equivalent to the semantics: polar questions have been argued to have the semantic denotation of  $\{p, \sim p\}$ , or the set of possible answers (Karttunen 1977, Farkas & Bruce 2010 i.a.). AnderBois (2011) argues that in Yucatec Maya, propositions with this semantic representation are interpreted as questions via the interaction of focus and disjunction, but explicitly states that he does not analyse the syntax of this language similarly. However, I claim that the syntactic and semantic analyses of polar questions are essentially identical.

I present synchronic evidence from Thai, Turkish and Japanese that suggests that polar questions are historically derived from the disjunction of two propositions. Some languages retain this syntactic structure, while in other languages change takes place obscuring this origin. I show that there are differences between the question particles in these two types of language and that they can be explained by the reanalysis or otherwise of the particle. The (non-)occurrence of such reanalysis can be attributed to the Final-Over-Final Constraint (Biberauer, Holmberg & Roberts, forthcoming), a word order constraint.

This paper links the syntax and semantics of questions and provides further understanding regarding a historical change that has been documented for other languages (e.g. Mandarin, Aldridge 2011).

**Selected references:** AnderBois, S. (2011) *Issues and Alternatives*. Ph.D. thesis. University of California Santa Cruz. • Biberauer, T., Holmberg, A. & Roberts, I. (forthcoming) ‘A syntactic universal and its consequences’. To appear in *Linguistic Inquiry* • Farkas, D. & Bruce, K. (2010) ‘On reacting to assertions and polar questions’. *Journal of Semantics* 27: 81–118. • Karttunen, L. (1977) ‘Syntax and Semantics of Questions’, *Linguistics and Philosophy* 1: 3–44. • Roberts, I. & Roussou, A. (2003) *Syntactic change: A minimalist approach to grammaticalization*. Cambridge: Cambridge University Press.

## Learning the building bits of inflectional paradigms

Sebastian Bank and Jochen Trommer

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Every formal description of inflectional systems faces two intertwined analytical problems: the *Meaning Assignment Problem* and the *Subsegmentation Problem* (cf. Müller 2008). Consider the distribution of the segment string *eci-* in the Classical Ainu agreement paradigm in (1). A reasonable hypothesis is that it has the meaning [+2 +pl], since it occurs in all forms where either the subject or the object is 2nd person plural. This however presupposes the segmentation of *ecien-* and *eciun-* in 2pl→1 into *eci-* and separate markers *en-* and *un-*.

(1) **Ainu Transitive and Intransitive Verb Agreement** (Tamura 2000)

A→P	1sg	1pl	2sg	2pl	3sg	3pl	S	–
<b>1sg</b>			eci-	eci-	ku-	ku-	<b>1sg</b>	ku-
<b>1pl</b>			eci-	eci-	ci-	ci-	<b>1pl</b>	-as
<b>2sg</b>	en-	un-			e-	e-	<b>2sg</b>	e-
<b>2pl</b>	ecien-	eciun-			eci-	eci-	<b>2pl</b>	eci-
<b>3sg</b>	en-	un-	e-	eci-			<b>3sg</b>	
<b>3pl</b>	en-	un-	e-	eci-			<b>3pl</b>	

On the other hand, one might also argue that the meaning of *eci-* is more general and denotes [+2], since it also occurs in forms with 2nd person singular objects, although only if the subject is 1st person. Conversely, one might assume that some (or all) instances of the segment string *eci-* in the Ainu paradigm are formed from the affix *e-* which shows up in 2sg forms and the 1pl affix *ci-*.

What tends to make the analysis of complex inflectional systems potentially intractable is the accumulative effect of both problems, which results in an unwieldy amount of analytic options. Clearly, the comparison of morphological systems requires keeping constant the strategy for the solution of these problems. However, while an intuition implicitly underlying the bulk of the theoretical literature on complex inflectional systems seems to take it for granted that learners of morphological grammars have strategies which ensure an optimal solution to both problems, proponents of the major approaches to theoretical morphology (e.g. Halle and Marantz 1993, Stump 2001) have never made specific proposals for algorithms which would achieve this goal. Approaches to morphological learning in the tradition of American Structuralism offer a partial solution to subsegmentation by assuming that segmentation is independent from meaning assignment and based purely on the distribution of segments (Harris 1955, 1967, Goldsmith 2001, 2010). Pertsova (2011) proposes a learning algorithm which tackles both meaning assignment and imperfect distributions, but does not address the Subsegmentation Problem.

In this talk, we show that a unified approach to both problems is possible by outlining a learning algorithm that uses optimal patterns of paradigmatic distribution of potential affixes as the main criterion for computing morpheme meaning and subsegmentation of affix strings. The central idea is that learners apply local optimization in the sense of the Harmonic Serialism version of Optimality Theory (McCarthy 2010): Every optimization step consists in identifying the affix with the optimal distribution in a paradigm, assigning a morpheme entry (i.e., a phonological shape coupled with a feature specification) to it, and to “freeze” the substrings corresponding to the newly learned affix in the paradigm for further learning and subanalysis. In subsequent steps the same procedure is iteratively applied to the remaining inflectional strings in the paradigm until all phonological material in the paradigm is exhausted and assigned to morpheme entries. As expected in an optimality-theoretic setting, optimization involves a small set of ranked and violable constraints. Significantly, we will show that different rankings of these constraints result in learning morpheme inventories which are optimal for different assumptions on the optimal means to account for imperfect distribution of affixes.

## East Lancashire rhoticity and intrusive-r are fine in theory

Will Barras

University of Aberdeen

Most discussions of English phonology argue that rhoticity and r-sandhi are necessarily in complementary distribution, citing the diachronic path that led to the loss of rhoticity and the resulting synchronic  $r \sim \emptyset$  alternations in non-rhotic dialects. However, some accounts suggest that 'it would not be surprising to discover cases of intrusive-r in rhotic dialects' (Harris 1994; see also Carr 1999, Uffmann 2007). In this paper I present data from speakers in East Lancashire who have variable levels of both rhoticity and r-sandhi. The nature of my sample population allows me to consider both change in apparent time and variation across geographical space.

I show that levels of rhoticity are increasing for some young speakers in the least urban and most isolated area surveyed, which supports the hypothesis that a local linguistic feature can have a 'last gasp' under pressure from a competing non-local feature, before its eventual loss. However, the same speakers are also adopting intrusive-r more quickly than speakers from neighbouring areas. Importantly, this is not a reflection of what Wells labels 'rustic folk speech in rhotic areas' in which non-etymological r occurs 'in all phonetic environments' (1982: 221). Rather, this non-etymological r is restricted to sandhi contexts. This shows that intrusive-r is becoming adopted as a hiatus-filling strategy: a phonological process is being used by some rhotic speakers independently of the loss of contrasts (e.g. *bar* ~ *bah*) which caused it to emerge in non-rhotic dialects.

I suggest that the phonological process of hiatus-filling r-sandhi can spread through dialect contact, with a mixed phonological system emerging as a result. Although the data suggest a correlation between the loss of rhoticity and the development of r-sandhi, the nature of the overlap means that a phonological model must allow for speakers to have both features, even if rhoticity will eventually be lost completely.

Hay & Sudbury (2005) argue that the gradual development of linking and intrusive-r leading to their convergence to a single synchronic phenomenon 'is not a process that can be well described by any categorical, phonological grammar'. I show that the current situation in East Lancashire speech can be described by existing phonological models with underlying representations and associated surface forms. Uffmann's OT model (2007) does not rule out a parallel distribution for rhoticity and intrusive-r in which individual speakers can have both features; despite the diachrony of non-rhoticity and r-sandhi in English, rule-based phonologies can also allow for this synchronic parallel distribution. Present day dialect variation data show that it is important to allow the possibility of speakers being simultaneously rhotic and r-intruding.

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**Subtypes ofthetic expressions:  
a cross-dialectal survey of Romance languages of Italy  
Delia Bentley, Francesco Maria Ciconte and Silvio Cruschina  
University of Manchester**

In this talk we report the findings of a large-scale research project on Italo-Romance, Sardinian, and Provençal dialects of Italy. Although the principal focus of the project is on existential constructions, i.e., constructions which, in the dialects of our survey, consist of the sequence (*there*) + copula + NP, we also consider other intransitive constructions with a postverbal NP. We ascertain that existential constructions arethetic structures, or sentence-focus constructions, in the sense of Lambrecht (1994: 233-35). Intransitive constructions with a postverbal NP can either involve sentence focus or argument focus (Lambrecht 1994: 228-33). In the latter case, they have narrow focus on the postverbal NP. We discuss the principal morpho-syntactic features of the constructions under investigation, comparing them with those of SV(X) predicate-focus structures (Lambrecht 1994: 226-28) in the same dialects. The principal hallmarks of sentence and argument focus identified in our study are as follows: (i) VS order (cf. 1a); (ii) lack of subject agreement (cf. 1b); (iii) expletive subjects (cf. 1c); (iv) locative proforms (cf. 1d); (v) discontinuous QPs (cf. 1e):

- (1a) *I EN PASÈ DU FURASTER* (Felino, Emilia Romagna)  
SUBJ be.3PL passed two strangers
- (1b) *TUN STA FRÒTTA C' È TANT SEM* (Gallo, Marche)  
In this fruit PROFORM be.3SG many seeds
- (1c) *Nu puremmu divursià: U GH' È I MATTI* (Genova, Lig.)  
NEG can.COND.1PL divorce EXPL PROFORM be.3SG the children
- (1d) *Ci su I TAPPINI, sutta ô lièttu* (Modica, Sicily)  
PROFORM be.3PL the slippers under the bed
- (1e) *(Òva) penso che ce ne sia OTTO* (Siena, Tuscany)  
Eggs think.1SG that PROFORM of.them be.SBV.3SG eight

Whereas VS order characterizes sentence and argument focus, but not predicate focus, in all our dialects (in very few dialects, alternating with SV order and prosodic prominence on S, in the case of argument focus), a great deal of micro-variation is found with respect to the features listed in (ii) to (v) (Bentley et al. 2012, 2013). We further compare our evidence with that of English, since Romance and English are claimed to differ in the encoding of focus at the syntax-prosody interface (Ladd 1996, among others). We thus address the question of whether the multiplethetic strategies identified in our body of data are peculiar tothetic constructions or, rather, depend on general properties of the languages under investigation. Our cross-constructional and cross-dialectal analysis leads us to argue that the strategies identified depend on general constraints on the subject (Beaver et al. 2006, Bentley 2012), and on the encoding of information structure, rather than being peculiar tothetic expressions. A possible exception to this the unexpressed argument that provides the spatio-temporal coordinates of the existential predication (Francez 2010).

We deal with two further issues: first, whetherthetic expressions can include topics. Our evidence indicates thatthetic constructions can indeed include a special type of topic, which we call aboutness topic. This can be defined as ‘what the sentence is about’, but it is not part of the presupposition, in Lambrecht’s (1994: 52) sense of presupposition. Italo-Romance provides evidence from word order in support of our claim. Second, we note that bipartite structures formed by a pseudo-existential sequence (*there*) + copula + definite NP, followed by a predicate of this NP (an adjective, a verb phrase, or a whole clause), can be considered to bethetic structures, similarly to Lambrecht’s (2000) syntactic amalgamates.

- (2) *Nc' È SUARMA CHI CANTA A CHIAZZA.* (Acquaro, Cal.)  
PROFORM be.3SG sister.POSS who sing.3SG at.the square

## Microparametric variation in A- movement in Northwest British English

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Although American and ‘Standard British’ English only permit passivisation of the goal argument of a double object construction (DOC), many dialects of British English (BrE) permit passivisation of both the theme and goal.

1. a. **She** was given it. *Goal passivisation*      b. **It** was given her. *Theme passivisation*

This is unexpected under standard views of syntactic locality. Previous studies propose that the availability of short movement of the theme to an outer specifier of the goal in the form of Theme-Goal Ditransitives (TGD) is a prerequisite for theme passivisation (TP) (Anagnostopoulou 2003, Haddican 2010); this short movement obviates intervention.

2. a. I gave her **it**. *DOC*      b. I gave **it** her. *TGD* (NW BrE)

The apparent dependence of TP on TGD is attested in the Manchester (Haddican 2010), Ormskirk (Myler 2010), and Lancashire (Siewerska and Hollman 2007) varieties of Northwest (NW) BrE. However, in these dialects TP is restricted to pronominals; new data to be presented here show that TP of full DPs with full DP goals are accepted in Liverpool BrE (3). Consistent with the feeding account illustrated in (2), TGD with full DPs are accepted in Liverpool BrE (4); however, unlike previously studied varieties, Liverpool BrE is sensitive to other restrictions, including obligatory pronominal shift (5a) and a restriction against indefinite theme DPs in TGD (6a) (as might be expected in a Germanic language). Yet in these contexts TP is nonetheless available (5b, 6b).

3. a. **The book** was given John by Mary.      b. **The package** was sent John by Mary.  
4. a. I gave **the book** the teacher.      b. John sent **the package** the school.  
5. a. \*I gave the book **her**.      b. **The book** was given her.  
6. a. <sup>??</sup>\*I sent **a package** the school.      b. **A package** was sent the school.

(5-6) suggest that the feeding approach advocated in previous work is not appropriate for Liverpool BrE. Instead, in contrast to the Manchester dialect in which TGD and TP really do derive from DOC (see Haddican 2010), Liverpool TP must derive from prepositional datives (PD) with a null preposition - (4) is thus only an apparent TGD - and no intervention effect is predicted. In support of this is that, unlike other NW dialects, Liverpool BrE permits preposition drop (p-drop) of *to* and *at* with non-directional verbs, with *straight*-modification (a classic diagnostic of PPs), and in contexts where the verb and indirect object are not adjacent; I propose that this extensive p-drop is extending to ditransitive verbs.

This null preposition PD analysis correctly predicts the distribution of TGD and TP in Liverpool BrE. For example, TP with a null preposition is available wherever TP of PD is possible, including with non-recipient and inanimate goals. This is not true of other NW dialects. In addition, it correctly predicts that Liverpool speakers accept inanimate verbs (*donate*), manner of communication verbs (*whisper*), and verbs of continuous parting force (*haul*, *lift*) in PD and TGD contexts, but not in DOC; TP are also permitted with these verb classes. In Manchester BrE, TGD pattern with DOC with respect to verb class (Haddican 2010:2428).

I explore two implications of this microvariation. The first is theoretical: the Liverpool data show that obviation of intervention effects in A-movement need not follow from structural locality (illustrated in (2)) (the position argued for in e.g. Anagnostopoulou 2003, etc.), but instead from the availability of Case. The second implication is diachronic: the data described so far is from speakers under 30; however, speakers aged over 60 restrict TGD and TP to pronominals and do not have extensive p-drop – the pattern familiar from other NW dialects. I argue, based on pronominal shift (5) and indefinites (6), that, although unexpected to find symmetric passivisation in a dialect of English (this is apparently the first reported), the innovations suggest that this dialect is converging with ‘Standard’ BrE ditransitives; the data also shed light on the triggers necessary for historical change in A-movement.

## Morphological universals and the hidden structure of words

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In Bobaljik (2012) [Universals in Comparative Morphology. MIT Press], I provided an extended argument, from the morphology of comparative and superlative formation, for abstract hierarchical structure in words, prior to the rules of vocabulary insertion that map this structure to phonological exponents. The key evidence is drawn from suppletion (*good-better-best*). I argue that in suppletion - by definition the most irregular of morphological phenomena - there are a number of (near) universal patterns that emerge across large, cross-linguistic samples. For example, (virtually) no language has a suppletive pattern of the sort: \**good-better-goodest* or \**good-gooder-best* -- if either the comparative or the superlative is suppletive (w.r.t. to the positive), then so is the other. The explanation of these patterns, I submit, requires (hidden) structure, in this case, a structure in which the superlative always properly contains (is derived from) the comparative, and is never directly attached to the adjective. Thus, forms like English *tall-est* must have a hidden comparative.

The results from the study of comparatives and superlatives, if correct, should extend beyond this morphological domain and provide a test for abstract structure in morphology much more generally. After summarizing the work on comparatives and superlatives, I report on the current state of efforts to go further and investigate the generalized predictions in other suppletive domains, including suppletion for verbal number and pronominal case.

# Dimensions of variation in the expression of functional features: modelling definiteness in LFG

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It has long been recognised that the traditional distinction word–clitic–affix is not sufficient to capture the full range of variation in the exponence of functional features cross-linguistically. Zwicky (1987) and others showed that the properties used to distinguish these categories do not always pattern as neatly as assumed by the three-way distinction, and he introduced the “hybrid category” PHRASAL AFFIX. More recent work has revealed further complexities, for instance Plank (1991) on genitive case exponence specifically and Spencer and Luís (2012a) more generally on bound elements.

In this paper, we will focus on the expression of definiteness cross-linguistically and argue that the range of variation in expression is even broader than has been recognised in this literature. The markers range from syntactically independent projecting words to purely prosodic processes and display variation in a number of discrete dimensions. We show that the LFG architecture enables these different dimensions to be modelled independently, and that the unnecessary problems created by over-simplistic categorisation (e.g. into “clitic” vs “affix”) evaporate as a consequence. By functional definiteness marker (FDM), we understand definiteness markers which by their presence are sufficient to induce a definite interpretation of a noun phrase, i.e. in LFG terms they will map to a [DEF +] feature in f-structure.

Examples of the dimensions of variation that have to be distinguished are:

(i) *Prosodic vs segmental* Does the FDM have solely prosodic instantiation, e.g. the Iron dialect of Ossete (Abaev, 1949) where stress shifts leftwards, or solely segmental instantiation (as in the majority of cases), or a mixture of these (languages like Tongan (Poser, 1985)). If definiteness is associated with stress placement, there has to be a mapping between a functional feature [DEF +] and p(rosodic)-structure.

(ii) *Syntactic vs morphological* Is the FDM introduced as a separate word by the c-structure rules, or is it introduced as a morphological component of another word? At the extreme syntactic end are elements such as the Danish definiteness marker, which can surface in isolation from a head noun in non-elliptic constructions. At the other end, we have FDMs which are clearly morphologically integrated with their hosts, as evidenced for instance by arbitrary irregularities. Syntactic FDMs will be represented by an independent category D. FDMs which are a morphological component of another category (typically N or A) will be modelled by an inside-out designator which associates the feature [DEF +] with the f-structure of the noun phrase.

(iii) *Prosodic independence vs dependence* English *the* is syntactic, like the Danish marker, and hence found under a D in c-structure, but unlike the Danish element, it is prosodically weak. Hence it needs a host and cannot occur independently.

(iv) *Single or multiple instantiation* Does one sole element introduce the FDM, or can a single noun-phrase contain multiple instances of such elements, as with definiteness agreement in Arabic? We assume that more generally, principles of economy cause avoidance of multiple exponence of any functional feature, but that languages may be uneconomical in this sense and require more than one marker. Frequently, a historical explanation for the multiple exponence can be found.

(v) *Paradigmatic contrast with other determiners* Does the element which introduces the FDM occur in complementary distribution with other determiner-like elements, e.g. demonstratives or possessor phrases, or is it happy to co-occur with these? The same principle of economy assumed for single or multiple exponence would be at work here.

(vi) *Standard versus special placement* Do the words which introduce FDMs occupy the positions which such words normally hold in the absence of definiteness marking, or are the words which introduce FDMs subject to special positioning by virtue of their definiteness?

In this paper, we will show how the analysis of any of these elements requires an architecture in which there is no assumption of a one-to-one mapping between dimensions. The general conclusion is that the properties discussed here and familiar from the literature on the distinction between ‘affix’ and ‘clitic’, do not define two or three or even four categories. At the very best, there may be some relatively common clusterings which could be abstracted into categories, but we are not even confident that a careful statistical analysis of the distribution of the properties would warrant this.

## Two dimensions of generalization for inflectional morphology

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Assume that in a given language we can isolate instances of lexical meaning (such as ‘spatula’) and grammatical meaning (such as singular). We can, in principle, establish a vast spreadsheet, to include every realizable combination of lexical and grammatical meaning. Our task is then to provide an insightful analysis of this data set, of the corresponding data from every other language, and to extract and explain the cross-linguistic patterns. Consider the following fragment of the data for the verbal forms of Burmeso (entirely due to Donohue 2001: 100, 102):

	assignment	‘see’		‘bite’	
		SG	PL	SG	PL
I	male	j-ih-	s-ih-	b-akwa-	t-akwa-
II	female, animate	g-ih-	s-ih-	n-akwa-	t-akwa-
III	miscellaneous	g-ih-	j-ih-	n-akwa-	b-akwa-
IV	mass nouns	j-ih-	j-ih-	b-akwa-	b-akwa-
V	banana, sago tree	j-ih-	g-ih-	b-akwa-	n-akwa-
VI	arrows, coconuts	g-ih-	g-ih-	n-akwa-	n-akwa-

The prefixal gender-number markers mark agreement with the absolutive argument. We look for generalizations in two dimensions: those based on the lexeme and those starting from the morphosyntactic description. Generalizations in either dimension will be preferred when they cover more instances and permit fewer exceptions. Since the lexical and morphosyntactic dimensions are very different in range, a useful heuristic is the degree to which a generalization in one dimension cross-cuts distinctions in the other. In the extreme, clearest instances, generalizations from the lexical dimension represent inflectional classes, and those from the morphosyntactic dimension would involve (morphological) vocabulary items (or morphemes).

If we extend our fragment of Burmeso to cover the full verbal lexicon, we find a substantial number of verbs exactly like *-ih-* ‘see’ and another equally large set like *-akwa-* ‘bite’. Donohue (2001: 101) states explicitly that: ‘... there are no obvious semantic correlations for verbs which take the different sets of prefixes, and both sets of verbs are of approximately equal size.’ Clearly Burmeso requires lexical generalizations (inflectional classes) since (i) the distribution of the affixes can be described only by reference to the particular lexeme (its membership in one of two inflectional classes); and (ii) the affixes are mutually predicting within the paradigm. The latter point demonstrates intra-paradigm structuring; this structuring supports lexicalist approaches, in a complementary way to the structuring demonstrated by suppletion-syncretism interaction (as found within Slovene nominal inflection).

Having established the need for lexical generalizations, we might hope for reasons of economy to eliminate generalizations in the other dimension. But we need look no further than Burmeso: we need to specify syncretisms (e.g., Gender V SG = Gender IV SG), since these cut across the inflectional classes. This particular generalization refers to featural specification as antecedent as well as consequent. Such generalizations (cross-linguistically) may also refer to semantic properties as antecedents (e.g. items denoting animates) and to phonological properties.

We conclude that the minimal requirements for inflectional morphology are lexical generalizations and cross-cutting generalizations on inflection. There is a diachronic trade-off between them, in that generalizations on inflection tend to decompose into lexical generalizations.

## Marginal contrasts and the Contrastivist Hypothesis

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**The question** The Contrastivist Hypothesis (CH; Hall 2007; Dresher 2009) holds that the only features that can be phonologically active in any language are those that serve to distinguish the phonemes of that language from one another. This general hypothesis, and its specific implementations in theories of contrastive specification (particularly the Successive Division Algorithm [SDA] of Dresher *et al.* 1994; Dresher 2009), would seem to presuppose that phonemic status is categorical. However, Hall (2009) demonstrates that there is a continuum of possible relations that can hold between two phones, from completely predictable allophony to total contrastiveness in all environments, and that many pairs of phones do in fact occupy intermediate positions along this continuum. Using the information-theoretic measure of entropy (in the sense of unpredictability), Hall (2009) shows that a pair of sounds may have an entropy of less than 1 (totally unpredictable) and greater than 0 (totally predictable) if they contrast in some environments (definable in either phonological or non-phonological terms) but not in others, or if one of them is significantly less frequent than the other. Does the existence of such intermediate degrees of contrastiveness make the CH untenable, or even meaningless? We argue that it does not; furthermore, we claim that marginal contrasts offer a key source of insight into diachronic changes in phonemic inventories and contrastive hierarchies.

**Non-zero entropy** In general, the existence of a continuum in no way precludes the possibility of categorical distinctions. In the specific case of phonemic contrast, there is an obvious line to be drawn between pairs of phones with zero entropy and pairs with non-zero entropy: if they are unpredictable in at least some contexts, then the system of phonological representations must have some means of distinguishing them. In the SDA, features are assigned only when they serve a contrastive function, but there is no guarantee that features will be assigned in the most efficient way. Indeed, given standard binary or privative features, contrastive specifications *cannot* be maximally efficient unless the number of phonemes happens to be a power of two (Mackie & Mielke 2011). Similarly, even if the entropy of a pair of phonemes is less than one, a discrete phonological computation cannot use less than one feature to distinguish them.

**The case of Pulaar** Pulaar ATR harmony provides an example of the importance of marginal contrasts for the CH. Pulaar high vowels /i u/ cause preceding mid /ɛ ɔ/ to become [+ATR] [e o] (Paradis 1986, 1992). Campos Astorkiza (2007: §4.3.3) claims that this requires a non-contrastive feature to be phonologically active. ([ATR] cannot be the only feature that distinguishes /i u/ from /ɛ ɔ/, because then harmony would be expected to turn /ɛ ɔ/ into [i u].) This claim, however, ignores or denies the existence of marginally contrastive underlying /e o/, which arguably occur in (at least) three Pulaar morphemes: /fof/ 'all,' the diminutive singular suffix /-(g)el/, and the noun class marker /-(g)ol/ (Paradis 1992: 90; Hall 2007: 124–125). The two suffixes trigger ATR harmony just as high vowels do, and so give rise to a larger number of surface instances of [+ATR] mid vowels that are not followed by high vowels. Paradis (1992) avoids positing underlying /e o/ by analyzing these morphemes as /fɔuf/, /-(g)ɛil/, and /-(g)ɔul/, with the [+ATR] mid vowels arising either through coalescence or through harmony followed by deletion of the high vowels. However, if the marginal surface contrast is analyzed as a categorical underlying contrast, with /e o/ included in the phonemic inventory despite their unusually low frequency of occurrence, then [ATR] can be characterized as contrastive in the Pulaar system: [ATR] distinguishes /i u e o/ from /ɛ ɔ/, and within the [+ATR] set, [high] distinguishes /i u/ from /e o/. From the perspective of the CH, only the outright loss of phonemic /e o/—the reduction of the entropy of [ATR] all the way to zero—would remove the possibility of [ATR] being phonologically active. Furthermore, if contrastiveness is indeed a prerequisite for phonological activity, then the fact that [ATR] is phonologically active may serve as a cue to learners that it is contrastive, thereby sustaining the contrast diachronically despite its marginal status. The diachronic progress of marginal contrasts is thus a prime testing ground for the CH.

## An expletive approach to decausative morphology

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Within Generative Linguistics nowadays a frequently accepted analysis for the decausativization morphology is that it is an exponent of a little-*v* category which does not project an external argument for the verb (see Embick, 1998; Kalluli, 2006; McGinnis, 1995). Such analysis relies on the hypothesis there are at least two little-*vs*, one projecting an external argument, and other not projecting it. The natural morphology derived by such systems is that of Equipollent causative/anticausative alternations (see Haspelmath, 1993), in which both causatives and anticausatives are derived from an independent root and not one from each other.

Besides the fact that equipollent alternations are far away from the majority of the valence alternation types (in Haspelmath's, 1993 corpora they correspond to less than 20% of alternations from 21 languages), this kind of analysis of decausative morphology fail to capture the already observed fact that languages seem to categorize its verbs in terms of spontaneity. According to such reasoning, verbs denoting more spontaneous events will more likely be unmarked anticausatives, while verbs denoting less spontaneous events will be marked transitives (see Langacker, 1988; Haspelmath, 1993; Doron, 2012). The syntactic characterization of decausativization marks as detransitivizing operators also brings difficulties to explain the syncretism of such marks in the sense they not only mark anticausatives but also middles and sometime full reflexives (see Geniusienie, 1987; Kemmer, 1993; Haspelmath, 2003).

If such marks were detransitivizing operators, why some languages would use them as the subject of Small Clauses in reflexive ECM contexts such as the French *Jean se considere intelligent* (John considers himself intelligent). Also, why would the subject of reflexives marked with decausative marks would behave differently from the subjects of anticausatives, as pointed by Reinhart & Siloni (2005) in relation to phenomena such as Hebrew VS order and Russian Genitive Subjects, only restricted to anticausatives and ungrammatical with reflexives.

By comparing 30 languages (Portuguese, French, Italian, German, Dutch, Czech, Polish, Russian, Albanian, Greek, Arabic, Hebrew, Persian, Turkish, Finnish, Georgian, Laz, P'orpecha, Otomi, Kabardian, Tabasaran, Mandarin, Cantonese, Kannada, Telugu, Tibetan, English, Yoruba, Indonesian and Udmurt) in this work I built the following scenario with respect to decausative marks. First, they tend not to occur in Analytic/isolating languages – they are related to morphological processes of incorporation (cliticization, affixation). Second, they do not occur in cognitively ergative languages (in the sense of Langacker 1988). Third, they only occur in anticausatives if they occur at least in middles or full reflexives. Fourth, in respect to ECM reflexivization, only clitics allow it.

Such scenario corroborates an analysis of anticausatives in the spirit of Schäfer (2008), in which decausative marks are the phonological realization of an expletive in the external argument position of transitive verbs. I show, however, the principle of Late Insertion, found in the Distributed Morphology theory (DM), and the Copy Reflexive theory (Hornstein, 2001), can be added to such analysis in order to capture the relation of decausative marks and reflexivity. Incorporated reflexive marks here are analysed as the phonological realization of non-focused lower copies of the subject of reflexives. Such copies can be incorporated by the Morphological Merger, generating an affix and blocking ECM reflexivization or by Local Dislocation, generating a clitic and allowing ECM reflexivization. DM's Subspecification principle guarantees the possibility incorporated phonological exponents may surface in the place of external argument expletives and also in other contexts such as impersonal subjects, having us a cross-linguistically more realistic theory for the morphology of decausativization.

# Phonologization of predictable allophones in West Germanic

Elan Dresher

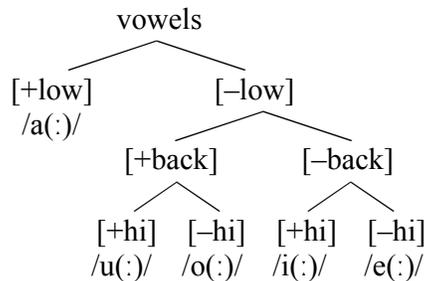
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Kiparsky (to appear) calls attention to an apparent paradox at the heart of the familiar account of the phonologization of front rounded allophones created by *i*-umlaut in Old High German. As first proposed by V. Kiparsky (1932) and Twaddell (1938), front rounded vowels [y] and [ø] first arose as positional allophones of stressed /u/ and /o/, respectively, when these vowels were followed by /i/ or /j/; e.g., OHG \*huot-i ‘hats, helmets NOM. PL.’ became *hyeti*. Later, the /i/ or /j/ that triggered umlaut was deleted or reduced to [ə] (written *e*), causing the fronted allophones to become contrastive (cf. NOM. PL. *hyete*, DAT. SG. *huote*), and hence, phonemic.

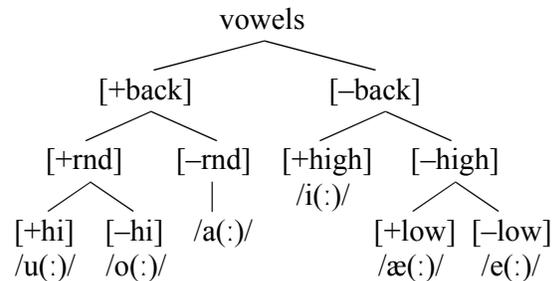
Kiparsky argues that as long as *i*-umlaut remains a postlexical rule, the loss of the umlaut trigger ought to result in the front allophones reverting to [u] and [o], not in their phonologization. He argues that for the latter to happen, *i*-umlaut must become a lexical rule, with the result that the lexical phonology must include purely predictable allophones. Kiparsky concludes that the solution to this problem requires “abandoning the concept of a phoneme as a contrastive entity, and positing that phonemes-to-be somehow get phonologized before they become contrastive through the loss of the conditioning factor.”

In a hierarchical approach to contrast (Dresher 2009), phonemes are contrastive entities, but not necessarily made up of entirely unpredictable features. Consider, for example, the West Germanic vowel system. Building on Purnell & Raimy (to appear), Dresher (to appear) proposes the hierarchy in (1), with the ordering [low] > [back] > [high] > [long]. Note that /i(:)/ and /u(:)/ have the features [-low, +high]; since the combination [+low, +high] is impossible by the definition of these features, any [+high] phoneme is predictably [-low]. Therefore, the latter feature is predictable but contrastive (see Dresher 2009 for discussion).

(1) West Germanic vowel hierarchy



(2) Early Old English vowel hierarchy



Suppose that *i*-umlaut existed in West Germanic as a postlexical rule (see Penzl 1972, Voyles 1992 for different views). In order for /u(:)/ and /o(:)/ to yield front rounded allophones, *i*-umlaut must occur after their [+back] feature has been enhanced by [+round] (cf. Hall 2011). Given the hierarchy in (1), we would expect umlaut to remain a post-enhancement rule, as [round] is not contrastive and cannot enter the lexical phonology. Dresher (to appear) argues that a contrast shift had occurred by early Old English, due in part to the development of a new [back] contrast between /a(:)/ and /æ(:)/. At this stage, it is possible for [round] to become a contrastive, though predictable, feature on /u(:)/ and /o(:)/, as in (2). Thus, *i*-umlaut can be promoted to the lexical phonology: adding [-back] from /i(:)/ or /j/ to the features of /u(:)/ and /o(:)/ results in [-back, +round] allophones [y(:)] and [ø(:)]. Then, when the umlaut triggers are lost, the feature hierarchy can accommodate new phonemes /y(:)/ and /ø(:)/ by extending the [round] contrast to the [-back] branch of the tree in (2).

This case is parallel to that of the Old English voiced fricatives, which, prior to becoming independent phonemes, are ‘deep allophones’ (Moulton 2003), predictable but present in the lexical phonology. These analyses show that such ‘deep allophones’ and predictable features are consistent with the traditional concept of the phoneme as a contrastive unit.

## Event-central and entity-central subtypes of thetic utterances and their relation to focus constructions

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The paper intends to analyze the variation found for the expression of thetic utterances in single languages and crosslinguistically, taking up the differentiation between event-central and entity-central thetic utterances made by Sasse (1987, 2006). While Sasse bases this differentiation primarily on formal grounds, the paper seeks to investigate the relation of these two types of thetic statements to functional usages on the basis of a sample of different African languages.

It will be shown that many languages exploit polyfunctional structures that are also used to express focus, to cancel the default topic-comment interpretation of subject-predicate structures. But while the use of “subject focus constructions” (see (1)), i.e. often an entity-central strategy, was reported for a number of African languages (cf. Fiedler et al. 2010), the use of “verb focus constructions” (2), i.e. an event-central strategy, is not as well known, and probably rather seldom found:

- (1) Anii (Kwa, Benin) – “subject focus construction” for stage-setting

*guya*            *dəŋ*            *dà*    *ká*.  
old\_person    INDEF    be    SFOC

‘Once, there was an old man.’ (author’s fieldwork)

- (2) Wolof (Atlantic, Senegal) – “verb focus construction” for explanation

*Paa*    *bi*    *da-fa*    *dindi*    *palanteer*    *bi*  
daddy    DET    V.FOC-3S    remove    shutter    DET

{This room is cold!} ‘(It is because) Daddy has removed the shutter.’ (Robert 2010: 253)

Furthermore, it seems that “non-subject focus constructions” are never exploited for the expression of thetic statements.

The paper will shed light on the similarities of these two different information- structural conflicting domains, focus and theticity, which are underlying the sharing of the same formal devices. Whereas the “subject focus construction” seems to serve the need to detopicalize the subject, this is not as apparent for the “verb focus construction”. Here, it is rather the event that is made more prominent without necessarily touching the pragmatic value of the grammatical subject. The comparative analysis of this structure in a range of African languages will allow detecting the common basis of event-central thetic utterances and verb-focus.

Given the co-existence of entity-central and event-central thetic utterances in some languages, one could also expect a correlation between form and function, to the extent that the former are preferably used for the stage-setting of new discourse participants, whereas the latter might be restricted to cases where the event as a whole is in the center of attention (cf. Sasse’s 1987 description for Arabic). A first look at the distribution of these two subtypes in different functional domains seems to contradict this expectation, insofar as this correlation cannot be established in all languages. Therefore the paper seeks for explanations of this form-function mismatch by looking at possible other constraints, as the general language structure, the information-structural profile of a language (including the restrictions on the use of verb focus) and the nature of the predicates used.

## Postlexical syllabification in Icelandic and the special role of FENs

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Icelandic is a language with tonic lengthening, in which all vowels are lengthened in stressed open syllables (with the proviso that the word-final consonant is always extrametrical). There are, however, two rules for syllabification (Árnason 2011). The first one is lexical and applies morpheme-internally and in some derived forms. The second one is post-lexical and applies in some other derived forms, in compounds and across word boundaries.

The environment of the lexical rule is relatively reminiscent of what may traditionally be called an open syllable: a vowel not followed by a cluster of falling (or not sufficiently steeply rising) sonority. Hence underlying /Vp<sup>h</sup>r/, /Vk<sup>h</sup>r/ (vowels followed by a branching onset) are realised as long on the surface, whereas underlying /Vðr/, /Vsp/, /Vp<sup>h</sup>k<sup>h</sup>/ etc. (vowels followed by a coda-onset/bogus cluster) always yield short vowels. However, the latter regularity does not apply at the post-lexical level. Consider the following compounds:

- |   |  |
|---|--|
| (1) <i>von</i> [vɔ:n] ‘hope’                    | <i>von+legur</i> [ˈvɔnleɣʏr] ‘reliable’  |
| <i>haf</i> [ha:v] ‘ocean’                       | <i>haf+kola</i> [ˈhavkɔla] ‘sea breeze’  |
| <i>vor</i> [vɔ:r] ‘spring’                      | <i>vor+kuldi</i> [ˈvɔrkʏlti] ‘spring chill’                                      |
| <i>rauður</i> [ˈrœy:ðʏr] ‘red’                  | <i>rauð+leitur</i> [ˈrœyðleɪtʰʏr] ‘reddish’                                      |
| (2) <i>brosa</i> [ˈprɔ:sa] ‘to smile’           | <i>bros+legur</i> [ˈprɔ:sleɣʏr] ‘smiling’  |
| <i>bak</i> [pa:k <sup>h</sup> ] ‘back’          | <i>bak+poki</i> [ˈpa:k <sup>h</sup> p <sup>h</sup> ɔc <sup>h</sup> i] ‘rucksack’ |
| <i>hvítur</i> [ˈk <sup>h</sup> vi:tʰʏr] ‘white’ | <i>hvít+leitur</i> [ˈk <sup>h</sup> vi:tʰleɪtʰʏr] ‘whitish’                      |

The rule of syllabification has a really bizarre shape: if the final consonant of the first member of the compound is a fortis plosive or /s/, the vowel is always long, regardless of what is concatenated. The second consonant *does not matter*. If the first member ends in any other consonant, a coda-onset cluster is established and the vowel emerges as short. However, clusters arising in (2) cannot be branching onsets, since they never are morpheme-internally (/sl/ and /t<sup>h</sup>l/ always block lengthening). The only explanation would be that in (1) concatenation is synthetic, whereas in (2) it is analytic, but such a statement would violate modularity: morphosyntax decides whether suffixes attach synthetically or analytically and it cannot be dependent on a melodic property (like the presence of the {H} element). To remain modularity-faithful, a purely phonological treatment is desirable. This is why these data can be explained only by a theory which takes into account boundary information (translated into some truly phonological vocabulary – Scheer 2012) and operates on it during the process of syllabification.

The proposal will be couched within a modified model of Strict CV (Scheer 2004), which eliminates Proper Government and replaces it with Rightward and Leftward Interonset Government (resembling Cyran 2003, 2010). Both relations belong to computation, which proceeds invariably from right to left. Clusters arising on morpheme boundaries in (1) are due to LIO, which can almost always be established across an internal empty nucleus, but only in special circumstances across a FEN. The latter may happen only when the governee on the left is not too complex. In (2) the governee is complex itself (it contains {H}), and it is guarded by a FEN at that. This is why LIO fails, the FEN remains ungoverned and licences the preceding nucleus. Therefore, the preceding vowel emerges as long.

The activity of the interface consists in marking the FEN as the true ‘FEN’, which plays a role in establishing LIO and RIO and influences the course of syllabification. This proposal is a development of Scheer’s (2012) Direct Interface, according to which boundary information needs to manifest itself as a truly phonological object. The difference is that the output of translation is not empty syllabic space, but marking FENs as ‘true FENs’. This produces the above postlexical rule of syllabification. In the case of synthetic concatenation (when a bimorphemic word displays effects of the lexical syllabification rule) the interface does not upgrade FENs and they behave exactly like morpheme-internal nuclei.

## **Syntactic Universals? Evidence from Rangi and English word order**

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As evidence continues to emerge of cross-language variability in meeting supposedly universal Island Constraints (Ross 1967), debates have emerged as to whether such data should be subject to reanalysis, or should be excluded from the remit of grammar as due to performance constraints (Phillips *coming*, Hofmeister & Sag 2010). This paper argues that the dynamic stance of Dynamic Syntax (DS) offers a new perspective.

In DS, the incrementality of processing is incorporated into the grammar formalism, long-distance dependencies analysed not in terms of correlation between discrete configurational positions in a tree (HPSG, Minimalism, LFG), but through tree node relations which are underspecified at an early stage of the left-right building process: a left-peripheral DP decorates an “unfixed node” before being updated to a fixed position in the emergent structure during incremental build-up of propositional structure. Structure building in DS is grounded in a tree logic (Blackburn & Meyer-Viol 1994) according to which trees are defined in terms of a set of nodes uniquely identified by their relation to each other in the tree. This allows reiterated construction of a given tree relation as it will never give rise to a discrete result. In consequence, only one unfixed node of a type can be built at a time: the characterisation of an unfixed node will only express the information that this node is dominated by the root, and is not sufficient to distinguish it from a second such node. In this paper, we use this constraint to explain: (i) idiosyncratic ordering restrictions in Rangi, a Bantu language, in which the future participle is licensed to occur in a left-peripheral position as long as that position in the sequence does not also contain *wh*-expressions, focus expressions, temporal adjuncts, relative clause markers, negation markers; (ii) similar restrictions on English left-peripheral adjunct/ dislocated NPs; (iii) ordering restrictions in English precluding OSV and OVS orderings for simple transitive clausal sequences.

We conclude by evaluating the consequence of this for the status of disputed syntactic universals, showing how the *wh*-island and sentential-subject constraints can be explained in these terms, with data variability explained via such a constraint holding at the left periphery, possibly not holding at intermediate points, and not holding at the right periphery, as the constraint’s effect must by then have been resolved. We take these arguments to confirm universal constraints on syntax that, in being grounded in constraints on cognition in general, also dictate limits on language performance.

## Demystifying *them*: an NP deletion analysis for institutional "they"

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**Puzzle:** Institutional *they* (Sanford et al. 2008), in (1), is a pronoun that occurs without an explicit antecedent and refers to an implicit agent. Sanford et al. (2008) observe that institutional *they* does not require a fixed referent; while the second instance of *they* refers to the authorities in Edinburgh, the first instance of *they* refers to different authorities.

- (1) Why was it, he wondered that **they** never seemed to fix the roads here, while in Edinburgh **they** worked on the surfaces so often that things were made even worse?

(Sanford et al. 2008:373; originally from Ian Rankin, 1998, *Knots and Crosses*, pp. 3-4)

It has largely gone unnoticed that institutional *they* can occur in sentences such as (2a). In these sentences, *they* covaries with a situation that is described in the preceding linguistic context. For instance, (2a) entails: if John attends Bill's party, he expects Bill to have beer, if John attends Sue's party, he expects Sue to have beer, etc. Such a *covarying interpretation* is familiar from so-called *donkey sentences* (Geach 1962, cf. Elbourne 2005), illustrated in (3a). Based on this analogy, the meaning to be derived for examples like (2a) is sketched in (2b), where *s* is a situation variable (Kratzer 1989). It is a puzzle how the reading in (2b) arises, since anaphoric pronouns generally require an NP antecedent that is not a subpart of a word (Postal 1969), illustrated in (3b). Yet, institutional *they* lacks such an antecedent by definition.

- (2) a. If John attends a party, he expects that **they** have beer.  
( $\approx$  for every party *x* that John attends, John expects that the hosts of *x* have beer)  
b.  $\forall x \forall s[[x \text{ is a party} \wedge \text{John attends } x \text{ in } s] \rightarrow \text{John expects the host of } x \text{ to have beer in } s]$   
(3) a. If a linguist owns a **donkey**, he keeps **it** in the garden.  
b. ?? Every **donkey**-owner keeps **it/them** in the garden.

**Core Analysis:** In the spirit of Elbourne (2005), I argue that institutional *they* spells out a stranded determiner *the* that combines with an elided NP roughly equivalent to *initiators (of the situation)*. In other words, if a situation *s* has initiators, institutional *they* can refer to them, i.e. to the people responsible for *s*. To illustrate, (2a) spells out the LF in (4a). Using Büring's (2005) rendering of such an analysis, I propose the denotation in (4b).

- (4) a. LF: If John attends a party, he expects that [<sub>DP</sub> **the** [<sub>NP</sub> **initiators**]] have beer.  
b. For every party *x* and base situation *s<sub>b</sub>* such that  $s_b \leq s$  is a minimal situation of John attending *x*, there is an extended situation *s<sub>e</sub>*,  $s_b \leq s_e$ , such that in *s<sub>e</sub>* John expects that the unique initiators of *s<sub>b</sub>* have beer. (*where s is the situation of evaluation*)

**Motivation:** First, institutional *they* is only licensed if we are talking about a situation that can be conceived of as having an initiator. In (5a), the owner/management of a jeweller's store is understood as the abstract initiator of a *jeweller store situation*, whereas it is less clear that a *building situation* has an initiator. This accounts for the contrast between (5a) and (5b).

- (5) a. <sup>OK</sup> If John goes into a jeweller's store, **they** always keep an eye on him. (*they*  $\Rightarrow$  owner)  
b. ?? If John goes into a building, **they** always keep an eye on him.

Second, the examples in (6) show that accommodation for an individual that is stereotypically present in a given situation is commonplace in natural language (cf. Singh 2011).

- (6) a. Whenever Sue goes to some church or other, **the priest** is appalled by her piercings.  
b. If Sue goes to a club, **the bouncer** always wants to see her ID.

Third, (7a), where *they* refers to the (responsible) airline (i.e. the *initiator*), is more acceptable than (7b), where *they* refers to the survivors, even though both can be construed as agentive.

- (7) a. <sup>OK</sup> If an aircraft crash-lands on a deserted island, **they** have to expect many lawsuits.  
b. ?? If an aircraft crash-lands on a deserted island, **they** have to find food and water.

Finally, I propose that INITIATORS have a special status in human language, being connected to Proto-Agentivity (Dowty 1990, Ramchand 2008); NP deletion for institutional *they* is then parallel to contextual licensing of VP deletion when an intended VP is highly salient, cf. (8).

- (8) *John pours another Martini for Mary. She says: I really shouldn't.* (Schachter 1977:764)

# The predicative marker *na* in Wolof: a case of polygrammaticalization

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Most Wolof predicative constructions involve a grammatical word: the predicative marker (PM). This marker is similar in three predicative constructions: Perfect (1), Optative (2) and Future (3). Although the relation between Perfect and Future PMs has already been described in the literature (Church, 1981; Robert, 1991), nothing has been said hitherto about their formal similarity with Optative. In this paper I will show that this similarity is due to a polygrammaticalization process (Hopper & Traugott, 2003), and that these constructions share a common origin of these constructions.

- |  |   |  |
|--|---|--|
| 1. <i>dem na-nu</i><br>go PM-1PL<br>'we have gone' | 2. <i>na-nu dem</i><br>PM-1PL go<br>'let us go' | 3. <i>dina-nu dem</i><br>PM-1PL go<br>'we will go' |
|--|---|--|

First, I hypothesize that the Perfect used to be a Verb Focus Construction in a former state of the language. Indeed, only a focalized element may precede the PM, and Perfect is the only construction in which the verb is followed by the PM (1). This Focus to Perfect change could be accounted for by a bleaching process, *i.e.* the loss of focus feature due to high-frequency use (Bybee, 2007). Indeed, Perfect is a high-frequency and semantically neuter construction in today's Wolof (Church, 1981; Nougier-Voisin, 2002).

Today's Wolof Future PM is due to a morphologization process (Hopper & Traugott, 2003). As a matter of fact, most authors analyze *dina* as the grammaticalization of the imperfective verbal auxiliary *di* and the PM *na* (Church, 1981; Robert, 1991). Therefore, according to my hypothesis, *dina* can be traced back to a focalized imperfective, *i.e.* a form emphasizing the habitual or continuous aspect of the process (Comrie, 1976); such value is semantically close to Future. Moreover, this analysis is confirmed by the actual focus meaning still apparent in the *dina* negative form (Robert, 1991).

As regards the origin of Optative, it seems to have emerged through a semantic change by inference, *i.e.* conventionalization of implicature (Bybee & *al.*, 1994). Indeed, in the oldest Wolof grammar (Dard, 1826), today's Wolof Optative is not mentioned, but the author describes an equivalent construction, involving the verb *yell* ('be suitable, be right') and the PM *na* (4). This evidence available in this grammar suggests that, at that time, the "*yell na*" construction was already frozen. Then, the *yell* support was progressively dropped, which triggered a semantic change of the PM *na* by inference. This kind of evolution is documented in other languages (Bybee & *al.*, 1994) and allows us to explain why the lexical subject is between the PM and the verb in Wolof Optative (5).

- |  |   |
|--|---|
| 4. <i>yell na Omar dem</i><br><b>be.suitable</b> PM Omar go<br>'it is suitable to let Omar go' | 5. <i>na Omar dem</i><br>PM <b>Omar</b> go<br>'let Omar go' |
|--|---|

Therefore, polygrammaticalization of the same original Verb Focus marker *na* can explain the formal similarity of Perfect, Optative and Future Constructions in Wolof. This allows a more coherent approach to Wolof verbal morphosyntax and accounts for typical characteristics of these constructions, such as the neutral value of Perfect, the actual focus meaning of *dina* negative form or the position of the lexical subject in Optative. Moreover, this analysis is absolutely compatible with the remaining Wolof predicative constructions and provides new perspectives to analyze the relations between such constructions.

## **Pre-aspiration and gemination in Aberystwyth English**

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This paper aims to establish whether there is a relationship between pre-aspiration and gemination in Welsh English by analysing their phonetic realisations and phonological conditioning.

Wells observed gemination for Welsh English in 1982, and the existence of gemination in WE would appear to be confirmed by the general perception of certain Welsh English disyllabic words. Pilot data show that pre-aspiration is a fairly common feature of English of speakers of Welsh. Although pre-aspiration is claimed to be a rare phenomenon (e.g. Silverman 2003), it has been recently observed for more languages (e.g. Spanish - Torreira 2007; Welsh - Morris 2010; Italian - Stevens and Hajek 2004, 2007, 2010, 2011), and it has been seen as possibly related to gemination by some (Keer 1998; Stevens 2010, 2011). Both Italian and Scandinavian languages employ or used to employ gemination, and Stevens has argued that pre-aspiration could be seen as a stage of degemination.

Results so far suggest that gemination itself is a variable feature of Aberystwyth English both across and within individual speakers, while pre-aspiration is found in English of all the Welsh speaking respondents who grew up in Aberystwyth in a much more consistent way. The ratios of the occurrences of gemination and pre-aspiration across different age groups may be one of the indicators of a possible relationship. Speakers from the age of 19 up to the age of 89 will be compared to show whether there is a negative correlation between the two.

Another aspect of pre-aspiration pointing out to its being a possible stage of degemination is the fact that it appears to be favoured especially when a short vowel precedes, and for some speakers only when a short vowel precedes. Crucially, gemination is reported to happen in Welsh only after short vowels (Wood 1988). The paper will present results of the occurrence of gemination and pre-aspiration after short vs long vowels for the various generations.

If pre-aspiration is indeed a stage of degemination, it can be further hypothesised that the duration of pre-aspiration and the closure of the plosive should be comparable to that of the closure of the geminated plosive. If the geminated plosive occurs together with pre-aspiration, then the duration of the closure and the pre-aspiration should be adjusted so that the overall duration is comparable to that of a plain geminated plosive. This can further correlate with the duration of pre-aspiration and the breathy part of the preceding vowel.

If both pre-aspiration and gemination are conditioned by the same length of the vowel and make up for the same durational properties of a plosive as a whole, this may be considered support to the claim that pre-aspiration is in fact an allophonic realisation of gemination. If there is a negative correlation in the occurrences of geminated vs pre-aspirated stops across different age groups, together with evidence for the other two hypotheses this could point towards pre-aspiration being a stage of degemination as well. Understanding the phonetic realisations of pre-aspiration is the first step towards understanding whether pre-aspiration and gemination should be seen as part of a single language change. For this to happen pre-aspiration must be one of the allophonic realisations of gemination conditioned by presence of a feature at the underlying level representing gemination.

# The Unagreement Conspiracy: nominal structure and zero spell-out

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I argue that *unagreement* (Hurtado 1985) between a 3rd plural subject DP and 1st/2nd plural subject agreement on the verb (1), observable in pro-drop languages like Spanish, Modern Greek and Bulgarian, results from zero spell-out of person features in the nominal domain. Other null subject languages like Italian and European Portuguese lack this construction.

- (1) Ftiaksame i fitites ena oreo keik. (Greek)  
 made.1pl the students a good cake  
 'We students made a good cake.'

**Cross-linguistically**, unagreement seems to correlate with the need for a definite article in adnominal pronoun constructions (APCs, "we linguists"), cf. (2) vs. (3).

- |                                       |                               |
|---------------------------------------|-------------------------------|
| (2) Unagreement                       | (3) No unagreement            |
| emis *(i) fitites (Greek)             | noi (*gli) studenti (Italian) |
| nosotros *(los) estudiantes (Spanish) | nós (*os) estudantes (E.Port) |
| nie studenti-*(te) (Bulgarian)        | we (*DEF) students            |
| we *(DEF) students                    |                               |

The analysis relies on post-syntactic vocabulary insertion of functional morphemes (Distributed Morphology; Halle&Marantz 1993, Embick 2010). I suggest the structure (4) with person and definiteness features hosted on separate heads in the extended nominal projection/*xnP* for the APCs in (2). The non-unagreement APCs in (3) have regular pronominal determiners (Postal 1969, Roehrs 2005) encoding definiteness and person on a single head (4). Building on Panagiotidis' (2002) analysis of pronouns as full DPs with a silent noun  $e_N$ , I propose that the overtness of Pers and NumP in (4) can vary independently, generating  $2 \times 2$  possible surface forms, including unagreement (5). **In both kinds of languages the (non)-realisation of D is context-dependent** (silent iff complement NumP is silent, i.e., in pronouns and *pro*). Therefore, non-realisation of the head encoding person features in (6),  $D_{pers}$ , is constrained to contexts without a silent complement, banning unagreement (7). The cross-linguistic variation is hence derived as interaction of the structural difference and a common condition on D-realisation.

- | (4)                   | PersP  | (5) Possible realisations   |  |                  |                   |            |     |                    |                       |         |            |
|-----------------------|--|---|--|------------------|-------------------|------------|-----|--------------------|-----------------------|---------|------------|
|                       | <pre>       /  \      /    \     Pers  DP          /  \         D   NumP            /  \           Num NP         </pre> | <table border="1"> <thead> <tr> <th></th> <th>overt Pers</th> <th>silent Pers</th> </tr> </thead> <tbody> <tr> <td>overt NumP</td> <td>APC</td> <td><b>unagreement</b></td> </tr> <tr> <td>silent NumP (<math>e_N</math>)</td> <td>pronoun</td> <td><i>pro</i></td> </tr> </tbody> </table>                                   |  | overt Pers       | silent Pers       | overt NumP | APC | <b>unagreement</b> | silent NumP ( $e_N$ ) | pronoun | <i>pro</i> |
|                       | overt Pers   | silent Pers   |  |                  |                   |            |     |                    |                       |         |            |
| overt NumP            | APC  | <b>unagreement</b>  |  |                  |                   |            |     |                    |                       |         |            |
| silent NumP ( $e_N$ ) | pronoun  | <i>pro</i>  |  |                  |                   |            |     |                    |                       |         |            |
| (6)                   | $D_{pers}$ P   | (7) Possible realisations   |  |                  |                   |            |     |                    |                       |         |            |
|                       | <pre>       /  \      /    \     D<sub>pers</sub> NumP          /  \         Num NP         </pre>                       | <table border="1"> <thead> <tr> <th></th> <th>overt <math>D_{pers}</math></th> <th>silent <math>D_{pers}</math></th> </tr> </thead> <tbody> <tr> <td>overt NumP</td> <td>APC</td> <td><b>unavailable</b></td> </tr> <tr> <td>silent NumP (<math>e_N</math>)</td> <td>pronoun</td> <td><i>pro</i></td> </tr> </tbody> </table> |  | overt $D_{pers}$ | silent $D_{pers}$ | overt NumP | APC | <b>unavailable</b> | silent NumP ( $e_N$ ) | pronoun | <i>pro</i> |
|                       | overt $D_{pers}$   | silent $D_{pers}$   |  |                  |                   |            |     |                    |                       |         |            |
| overt NumP            | APC  | <b>unavailable</b>  |  |                  |                   |            |     |                    |                       |         |            |
| silent NumP ( $e_N$ ) | pronoun  | <i>pro</i>  |  |                  |                   |            |     |                    |                       |         |            |

If the overtness of Pers depends on demonstrativity (cf. Rauh's 2003 analysis of pronominal determiners), the illicitness of overt pronouns in quantificational unagreement (8) is explained by the fact that those quantified phrases are not definite and hence cannot be demonstrative.

- (8) (\*Emis) poli taksidiotes aghapame ti Thessaloniki.  
 we many travellers love.1pl the Thessaloniki  
 'Many of us travellers love Thessaloniki.' (Greek)

This theory accounts for the cross-linguistic variation and suggests a unified treatment of the structure of full DPs, pronominals and (at least referential) *pro* in terms of (zero) spell-out of parts of the *xnP*. Open questions include the analysis of null subject languages lacking overt articles and the nature of the constraint on D realisation.

## **Magnitude estimation and what it can do for your dialect syntax and syntactic theory: ditransitive constructions in Lancashire dialect**

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Grammaticality or acceptability judgments as a basis for linguistic description and theory have a long tradition in especially formal, Chomskyan linguistics, where the method tends to rely on the linguist's own intuitions. Rather long, too, is the tradition of criticizing this method—mainly by linguists of different theoretical persuasions, see e.g. Labov (1972) and Sampson (1975, 2001).

Relatively recently, new techniques have been developed to make grammaticality judgments more robust than they used to be. In particular, from the field of psychophysics (Stevens 1957) linguists have borrowed magnitude estimation (Bard et al. 1996). Within generative linguistics magnitude estimation has since enjoyed some degree of popularity, with for example Cowart (1997) and Featherston (2005, 2007) offering more detailed and statistically more sophisticated accounts of aspects of (standard) English and German syntax compared to earlier work.

This paper extends the application of the method to dialect grammar. In this area magnitude estimation has thus far been almost completely ignored. The data under investigation concern the variation in the coding of theme and recipient in ditransitive constructions in Lancashire dialect, as in John gave it to me vs. John gave it me vs. John gave me it. A corpus-based perspective was offered by H. and Siewierska (2006) and Siewierska and H. (2007), who point to a strong association between this dialect and TH-REC order.

The present study is based on a survey among 101 participants from Lancashire and elsewhere. The results confirm the corpus-based findings, but also suggest that REC-TH order is considered significantly more acceptable in Lancashire than in other varieties, where the prepositional pattern is preferred. Passives were also included in the questionnaire, and the results show that both Lancashire and non-Lancashire speakers find passivisation more acceptable on REC (They were given the opportunity) than on TH (The opportunity was given them). This may be understood in light of semantic transitivity (Hopper and Thompson 1980), but a novel observation is that passivisation on TH improves if REC is linked to a preposition (The opportunity was given to them)—even in Lancashire, where the prepositional pattern would not seem to be more acceptable in the active. This raises the theoretical question for dialect grammarians and theoretical syntacticians alike as to why this should be.

Sprouse and Almeida (2012) suggest that magnitude estimation does not always yield more reliable data than traditional introspection. The sentences they tested, however, generally contain variants that have not been described in the literature as displaying very different degrees of acceptability across varieties of British or American English: they are either acceptable or unacceptable across the board. The constructions in the present paper, by contrast, display considerably more gradience in this regard, and I argue that in such cases magnitude estimation is preferable to intuitions—both in terms of yielding increased descriptive adequacy (cf. the TH/REC constellations) and in terms of potentially raising novel theoretical questions (cf. the passivisation data).

**Phonemicization vs. phonologization:  
voiced fricatives in Old English and Brythonic**  
**Patrick Honeybone and Pavel Iosad**  
**University of Edinburgh and University of Ulster**

In this paper we consider the phonological status of voiced fricatives in Old English and Brythonic Celtic. We suggest that even though the distribution of voiced fricatives in both of these languages is largely (if not fully) predictable (Minkova 2008, 2011), they must be viewed as phonologically distinct from voiceless fricatives, i. e. that they are distinct symbols manipulated by the grammar. We present both synchronic and diachronic evidence to this effect and argue that in both instances voiced fricatives appear as the result of a weakly unconditioned phonological lenition process (Honeybone 2012), and consequently that there is no need to view fricative voicing in English and Brythonic as triggered by language contact, *contra* Tristram (1995); Laker (2009).

It is well-known that Old English voiced and voiceless fricatives stood largely in complementary distribution, and the two segment classes are thus often treated as members of ‘the same phoneme’ (e. g. Hogg 1992, §7.67): in particular, Minkova (2008) argues that voiced fricatives predictably appear in the onset of the weak syllable of a trochaic foot. However, Laker (2009), who relies on the detailed study by Fulk (2001, 2002) showing that some instances of voiced fricatives cannot be accounted for by the rule given above, argues that the contrast between /f s θ/ and /v ð z/ was ‘phonemicized’ at an early stage due to contact with Brythonic, which possessed a voicing contrast in fricatives. However, Minkova (2011) rejects Laker’s proposals for an early ‘phonemicization’ (and, by extension, the Brythonic influence hypothesis).

In the paper, we suggest that the focus on the (un)predictable distribution of voiced and voiceless fricatives, i. e. *phonemicization*, obscures the issue of whether the two segments are featurally distinct symbols manipulated by the grammar, i. e. *phonologization* (e. g. Hyman 1976; Janda 2003; Bermúdez-Otero 2007). We argue that the sensitivity of the distribution to purely phonological factors (such as footing) and the diachronic persistence of voicing specifications in cases such as metathesis (as in *cær[s]e* ‘cress’ from *cre[s:]e*) suggest that, despite the phonological computation coercing the two segment classes into complementary distribution in surface forms, they must be viewed as featurally distinct (see also Moulton 2003). A similar argument can be made for the phonologization of voiced fricatives in Brythonic preceding their phonemic split from voiced stops (Jackson 1953).

Viewing the complementary distribution as enforced by the phonological grammar allows for a unified view of both synchronic and diachronic voicing in English and later Brythonic (specifically Breton), including the phonetically surprising voicing of initial fricatives, as a weakly unconditioned process (Honeybone 2012). Specifically, we argue that the patterns of fricative voicing are best seen as the result of an across-the-board markedness reduction process which is blocked in certain contexts, such as gemination (Honeybone 2005), and changes in the set of blocking contexts. We suggest that the patterns are both sufficiently similar to serve as typological parallels and sufficiently different to reject language contact as a necessary explanation of the phonologization, *contra* both Laker’s hypothesis of Brythonic influence on Old English and the suggestion by Tristram (1995) that the initial fricative voicing is an areal feature spreading from Britain across the Channel.

## Towards a typology of focus: microvariation at the discourse-syntax interface

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**Goal and claim:** This paper explores the discourse-syntax properties of the different constituents involved in focus fronting in Spanish. One of their main traits is that V must be adjacent to the focalized constituent. In line with Roberts (2010) and Biberauer et al. (2010), I show that this condition is subject to microparametric variation: some varieties of Spanish (Southern peninsular Spanish –SPS, hereafter) obviate this condition. I discuss the syntax of different kinds of focus, which crucially hinges on the discourse interpretation of pre- and post-verbal subjects. Depending on the type of focus, preverbal subjects are readily found in Spec-TP and interpreted as Familiar Topic. An experiment is carried out with native speakers in which they have to judge the grammaticality/acceptability of different types of fronted focus constructions in SPS.

**Background:** In Zubizarreta (1999) and in the RAE-ASALE (2009-2011) it is explicitly argued that Spanish focus preposing involves the occurrence of the subject in a postverbal position. This adjacency condition has been explained by proposing the movement of T to C (or T to Foc in cartographic analyses), after V being displaced to T (Rizzi 1997, Barbosa 2001). However, descriptive surveys such as the one carried out by RAE-ASALE does not take into account the different types of focus and includes all kinds of fronting within a single group regardless of the distinct salient properties at the levels of interpretation and intonation (Contrastive Focus (CF), Mirative Focus (MF), Resumptive Preposing (RP), and Quantifier Fronting (QF)):

**The test:** (the (A) sentence below provides the context; caps indicate the fronted focus).

(4) A: Iberia ha echado a 80 trabajadores en Sevilla. ‘Iberia has fired 80 employees in Seville’.

CF B.1.: ¡Anda ya! A 40 TRABAJADORES Iberia ha echado en Sevilla (no a 80).

B.2.: ¡Anda ya! A 40 TRABAJADORES, ha echado Iberia en Sevilla (no a 80).

‘No way! Iberia has fired 40 employees in Seville (not 80)’.

MF C.1.: Pero A 80 TRABAJADORES Iberia no puede echar así como así.

C.2.: Pero A 80 TRABAJADORES no puede echar Iberia así como así.

‘But Iberia can’t fire 80 employees this way’.

RP D.1. \*EL MISMO PROBLEMA la compañía está teniendo en Barcelona.

D.2. EL MISMO PROBLEMA está teniendo la compañía en Barcelona.

‘The company is having the same problem in Barcelona’.

QF E.1. Pues, ALGUNA RESPONSABILIDAD el Gobierno debería pedir a Iberia.

E.2. Pues, ALGUNA RESPONSABILIDAD debería pedir el Gobierno a Iberia.

‘Well, the government should demand accountability from Iberia’.

SPS Informants decidedly found constructions with postverbal subjects and preverbal subjects grammatical, except for RP, for which they clearly favoured postverbal subjects.

**Analysis:** To capture the use of preverbal subjects in SPS, I hold that in the type of focused constructions studied here subjects are topics, specifically Familiar Topics (Frascarelli & Hinterhölzl 2007 and Bianchi & Frascarelli 2010). In line with Jiménez-Fernández (2011) and Frascarelli & Jiménez-Fernández (2012, 2013), subjects with the discourse function of Fam-Tops may move to a TP-internal position in Spanish, accounting for the pattern FOC+Subj+VP. In this type of focused construction Foc does not trigger movement of V. This happens with CF, MF and QP, which undergo movement to a unique spec-FocP (contra Cruschina 2012). On the other hand, as in Italian (Cardinaletti 2010), in RP (which is identified as topic fronting to spec-TopP) V-to-Top is obligatory in all varieties of Spanish, hence there is no slot for preverbal subjects between the moved constituent and V. Arguments supporting this analysis will be given based on the syntax and discourse properties of floating quantifiers.

## Localizing the effects on the English particle verb alternation

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This paper explores the relationship between regional and grammatical effects on the English particle verb alternation between e.g. *John put on the kettle* (continuous order) and *John put the kettle on* (discontinuous order). We report on two acceptability-judgment experiments and a study of corpora including Twitter, the Corpus of Historical American English, and the Brown Family of corpora.

We address Hughes et al.'s (2005) claim that the continuous order is favored in Scotland while the discontinuous order is favored in Southern England. Our results revealed no support for a North-South difference across UK dialects, but instead show a trans-Atlantic difference: respondents from the UK and Ireland favored discontinuous orders while US and Canadian participants favored continuous orders. We speculate that this difference reflects change toward an innovative discontinuous order that has proceeded more quickly in Old World dialects than in North America.

Other effects tested in the judgment studies were the prosodic factor of object weight and the information-structural factor of object givenness. Greater object weight had a negative effect on the discontinuous order, anticipated under a processing account (Lohse et al. 2005). Greater object weight also showed an unexpected positive effect on the continuous order. While this “yoking” mechanism remains obscure, the very ability to assess the two effects independently is a clear methodological improvement over similar work (Bresnan 2007).

Regarding information structure, we find that the variation is sensitive to both the topic-hood and focus-hood of the object, independently, a result that is mispredicted by two previous approaches to these facts (Kayne 1998 and Dehé 2002). We propose that these effects reflect movement of the object or particle to a topic position high in the extended projection of the particle. The data thereby support an analysis suggesting that recently proposed structural parallelisms between the extended projection of P and those of V and N may also extend to discourse functional projections, high in the functional sequence (Levinson 2011).

## Yiddish and Aramaic morphosyntactic influence on the Early Modern Hasidic Hebrew tale

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UCL

The extensive corpus of Hebrew hagiographic tales composed in the late 19th and early 20th centuries by Eastern European Jewish followers of the Hasidic spiritual movement provides an unparalleled insight into a crucial stage in the diachronic development of Hebrew. Firstly, the tales comprise one of the chief linguistic forerunners of vernacularized Modern Hebrew. Secondly, they constitute one of the largest records of narrative and discursive use of Hebrew in traditional Eastern European Jewish society. Thirdly, they reflect an unusual case of triglossia: their authors were all native speakers of Yiddish, a West Germanic language, but their primary vehicle of written composition was Hebrew, a Northwest Semitic language, and they additionally possessed advanced reading knowledge of Aramaic, a very close linguistic relative of Hebrew.

Nevertheless, despite their significance the tales have not previously been the subject of linguistic analysis. Thus, while scholars such as E. Goldenberg (1971) and C. Rabin (2000) have categorized their grammar as strongly influenced by both Yiddish and Aramaic, this generalization has not yet been substantiated. The present paper is hence the first to fill this lacuna by providing a corpus-based examination of the nature and extent of Yiddish and Aramaic morphosyntactic elements in the corpus, illustrated with examples from tales published in Eastern Europe between 1864 and 1914 by prominent collectors including M. Rodkinsohn, M. Bodek, J. Kaidaner, E. Shenkel, and J. Duner.

The paper's main contention is that Yiddish influence on Hasidic Hebrew morphosyntax is indeed substantial, but that Aramaic influence is conversely only marginal. Yiddish morphosyntactic features are widely distributed throughout the corpus. They include 2pl pronouns and verbs serving as polite 2sg forms (e.g. Munk's *אתם הרגתם את בתי רבה* *attem haragtem et hayyeled šelli* 'And she came to him crying intensely, [saying], "You killed my child"'); 2m pronouns referring to female subjects (e.g. Kaidaner's *מה אתה רואה* *ve'amar leha'iš' ma atta ro'e* 'And he said to the woman, "What do you (m) want?"); realignment of noun gender whereby the traditionally feminine suffix *-t* is analyzed as a masculine marker and word-final [ə] serves as a generalized feminine marker; non-standard definiteness of head nouns in genitive constructions (e.g. Bromberg's *היראת שמים* *hayyirat šamayim* 'the fear of heaven'); definiteness discord in NPs (e.g. Bromberg's *ההסיד מפורסם* *heḥasid meḥasid meḥasid* 'the famous Hasid'); and the use of the *qatal* conjugation in past habitual and past progressive contexts (e.g. Rodkinsohn's *יום הולך לבית ערכאות* *veyom yom halak lebet arka'ot* 'And every day he went to the government office'). Conversely, the sole Aramaic feature regularly employed in the corpus is the possessive/relative particle *-d* (e.g. Kaidaner's *דקהילתינו הרב* *harab deqehillatenu* 'the rabbi of our community').

This striking discrepancy between the extent of Yiddish and Aramaic morphosyntactic influence is noteworthy because it indicates that the authors' Hebrew compositions were much more powerfully shaped by their genetically and typologically remote Germanic vernacular than by their linguistically similar Aramaic textual repertoire. This imbalance is likely attributable to two chief factors. Firstly, the subconscious impact of Yiddish was more pervasive because it was the authors' native spoken language, in contrast to Aramaic, which they acquired in writing at a later age. Secondly, the prominence of the Yiddish influence is due precisely to the fact that this substratum differs markedly from the two Semitic languages and therefore contains numerous constructions and usages absent from both.

**Get-passives and Broca's aphasia: an empirical investigation**  
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Since the seminal study by Caramazza and Zurif (1976) it has been acknowledged that despite the more salient impairment in language production exhibited by individuals with Broca's aphasia, a comprehension impairment also co-occurs. This impairment has been found to be highly selective. The Trace Deletion Hypothesis (TDH) (Grodzinsky 1984, 1995a, b, Grodzinsky 2000) represents one of the most influential and controversial approaches in this field and proposes that the sole locus of the syntactic comprehension impairment in Broca's aphasia is phrasal movement (Grodzinsky 2006). Over the last few decades a large number of studies have examined the comprehension performance of individuals with Broca's aphasia on a wide range of constructions. From this research a performance asymmetry emerges which tends to support the claim that phrasal movement may underlie the impairment in Broca's aphasia however the compensation strategy employed in the context of deleted traces has remained controversial (Beretta and Munn 1998). Although the passive construction has been used as strong evidence for the TDH it must be acknowledged that the passive is not a monolithic construction (Wanner 2009). In English an alternative passive exists, the *get*-passive. Despite the similarities of the *get*-passive to the traditional *be*-passive, there are syntactic and semantic differences (e.g. Alexiadou 2005, Brownlow 2011). The *get*-passive is not only ambiguous between an adjectival and a verbal construction (Reed 2011, Brownlow 2011), but it also carries idiosyncratic semantics which may affect the interpretation of this construction by individuals with Broca's aphasia. It has been argued that the subject of the *get*-passive, although a theme or undergoer of the event described, may also carry agentivity features ('*Secondary agent-hood*'; Roeper 1987). This construction therefore provides us with a unique opportunity, using a novel construction, to evaluate the claim that movement is central to the comprehension impairment in Broca's aphasia. Further to this, testing the *get*-passive allows us to evaluate the psychological reality of the compensatory strategies (such as Grodzinsky's 'agent-first' strategy) which may be employed by this population in syntactic comprehension tasks. 10 individuals exhibiting the traditional features of Broca's aphasia and 10 non-brain damaged controls were involved in the study. A picture selection paradigm was employed to assess the participant's comprehension of movement and non-movement derived constructions. The results indicated that, in accordance with the TDH, participants showed a performance asymmetry between actives/adjectival *get*-passives and verbal *get*-passives (short and long). However, the results did not support the 'agent-first' strategy of the TDH. According to the TDH, in the context of movement and non-canonical surface ordering of theta roles, the compensatory strategy will assign *agent* to the first DP in the surface string however this would predict systematic reversal of theta roles in the short *get*-passives which lack an implicit *agent* argument (Brownlow 2011) and hence no competition is predicted to arise. However the results did not support this assumption.

A current study is on-going to expand these findings and further evaluate the compensatory strategies which may be employed by individuals with Broca's aphasia on a wider range of constructions including: (1) short and long adjectival *get*-passives, (2) short and long verbal *get*-passives and (3) the *get*-causative construction. These constructions crucially allow us to test several hypotheses regarding the comprehension impairment in Broca's aphasia and the comprehension strategies which may be employed.

## Morphological structure and the processing of complex words: a case of Setswana deverbative nouns

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Current research on morphological processing is characterised by the question of whether the morphological structure of a complex word like *neat-ness* plays a role in processing or whether morphological effects can be reduced to the combined effects of shared forms and meanings (see Feldman, 2000; Gonnerman et al., 2007 for overviews). The majority of these studies have focused on inflected forms in Indo-European languages; and there is comparatively little research on derivation. This is partly due to the fact that derivation is rather limited in the languages that have been the focus of morphological processing studies so far. This makes it difficult to find verbs with several different noun derivations (*employer-employee-employment*). This is not the case for Setswana, a Bantu language of southern Africa, which has a productive noun-derivation system. We conducted three masked-priming experiments, involving the same triplets of

- (i) uninflected base verbs (e.g. *rek-a* 'buy'),
- (ii) the corresponding semantically and morphologically transparent Class-1 (C1) agent-deverbative nouns with their clearly identifiable affixes (e.g. *mo-rek-i* 'buyer'), and
- (iii) the corresponding Class-9 (C9) deverbative nouns, which can have a range of meanings and are not readily segmentable into an obvious stem and affix (*thek-o* 'a purchase') – even though their form is predictable based on the verb's phonological properties.

Targets were base verbs (Experiment 1; n=71), C1-deverbatives (Experiment 2; n=64), C9-deverbatives (Experiment 3; n=65). All forms appeared as primes as well. We also included control-conditions with formal and semantic overlap and a condition involving "pseudo-derived nouns", which look as if they were derived from a verb, but are in fact not morphologically or semantically related to this verb (*gora-kgoro* 'scrape off-door way'). The construction of these items involved semantic-relatedness questionnaires and the calculation of form-overlap measures. Given the lack of established frequency databases, word (form) frequencies were controlled using a combination of corpus frequency searches (Otlogetswe, 2010), a subjective frequency rating task (n=25) and a visual lexical decision experiment (n=83).

In all three masked-priming experiments, the prior presentation of an identical prime (e.g. prime: *reka* 'buy', target: *-reka* 'buy') significantly speeded up recognition times (RTs) for base-verbs, C1-deverbatives, and C9-deverbatives, compared to a baseline with morphologically unrelated words. This identity priming effects demonstrates the effectiveness of the masked-priming task for this language and population. The uninflected base-verb targets of Experiment 1 did not involve unprimed morphological components. For these base-verb targets, we observed partial priming by C1- and C9-deverbatives. That is, RTs for deverbative-primed verbs were longer than RTs in the identity condition, but shorter than RTs in the unrelated baseline-condition. This suggests that both types of deverbative primes were decomposed and the verb stems involved in them were pre-activated, speeding up base-verb recognition. This is remarkable given the fact that C9-deverbatives and their V-stems show very little formal overlap.

In contrast to Experiment 1, we did not observe any morphological priming effects for the morphologically related conditions in Experiments 2 and 3. Here, the target involved morphological components that were not contained in the base-verbs or the deverbatives that functioned as primes (e.g. the prefix *mo-* in Experiment 2). This suggests that the presence of unprimed morphological material in a morphological target word can eliminate or reduce priming (cf. Clahsen et al, 2001). Control conditions with purely semantically or formally related prime-target pairs in Experiments 1, 2, and 3 did also not show any priming effects. This indicates that morphological structure affects the processing of complex word forms independently of pure form overlap or semantic relationships.

## On the status of allophones in the Contrastivist Hypothesis

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The Contrastivist Hypothesis (Hall 2007, Dresher 2009) proposes that a language's phonemic inventory constrains the set of features in its phonology: all and only those features which are needed to distinguish phonemes can be referred to and manipulated by the grammar. As Odden (2012) observes, the status of allophones in the theory is unclear. Allophones, despite not being underlyingly contrastive, must receive a representation within the phonological component; and to the extent that more features are needed to distinguish surface allophones than underlying phonemes, the strongest version of the Contrastivist Hypothesis is not upheld.

In this paper I present a novel case from Huave (isolate; southern Mexico) of such 'feature-adding' allophony. In the variety of San Francisco del Mar, the front vowels /i/ and /e/ can surface either unchanged (1a, 2a) or as diphthongized allophones [jə] and [ja] respectively (1b, 2b), depending on the underlying palatalization of a following coda consonant. The result is that the plain vs. palatal contrast on final consonants is cued primarily by the preceding vocalic nucleus rather than on the consonant itself (Kim 2008).

- |     |                   |          |   |
|-----|-------------------|----------|---|
| (1) | Allophones of /i/ |          |   |
|     | a.                | [cim]    | /-im <sup>i</sup> / 'yesterday'         |
|     | b.                | [cicjəm] | /-im/ 'beans'                           |
| (2) | Allophones of /e/ |          |   |
|     | a.                | [amem]   | /-em <sup>i</sup> / 'fan', 3sg. present |
|     | b.                | [tjam]   | /-e-m/ 'go', 2sg. completive            |

Additionally, diphthongized /i/ raises to [jʊ] rather than [jə] before underlying fricatives (3a). Acoustic analysis supports a phonological analysis of this phenomenon: it is categorical, and there is no phonetic pre-fricative raising tendency in other vowels, including /e/ (3b). It is furthermore opaque: (3a) shows that the raised allophone remains even when the trigger is lost via pre-sonorant /h/-deletion.

- |     |                          |        |   |
|-----|--------------------------|--------|---|
| (3) | Pre-fricative diphthongs |        |   |
|     | a.                       | [pjəm] | /-ih-m/ 'lie down', 3sg. subordinate diminutive |
|     | b.                       | [pjam] | /-eh-m/ 'lie down', 3sg. subordinate            |

The result is that three vowel heights [ʊ ə a] must be distinguished in allophonic diphthongs, meaning that the feature hierarchy for the phonemic vowel inventory /i e a o u/ has to be expanded. The identical behavior of [ʊ ə a] in processes referring to [±back] and [±round] shows that the representational contrast cannot be on either of these dimensions, and so the allophones cannot be analyzed as combinations of underlyingly contrastive features.

In this paper I propose a modification to the Contrastivist Hypothesis: that only those features needed to distinguish *surface allophones* are present in the phonology of a language. I argue that this revision solves two key problems. First, it provides a principled way of deriving 'prophylactic' features (Hall 2007:87), enabling the prediction that only truly redundant features – those which do not serve to distinguish segments at any level of representation – are systemically absent from the phonology. Second, by separating phonological activity from the issue of underlying contrast, it avoids the analytical problem of deciding where to draw the line in cases of marginal or quasi-phonemic contrast, where there is arguably no clean break to be made. Instead, it predicts that a feature is in principle available as soon as it is present in the phonology at all. Stated diachronically, the revised hypothesis predicts that a feature, once phonologized, can begin to condition and undergo phonological processes at any point in its migration from surface towards underlying forms.

## Processing consonant length in Bengali: ERP and behavioural evidence

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About half of the world’s languages use consonantal length, i.e. geminates vs. singletons, to contrast words; e.g., Bengali [pata] ‘leaf’, [pat:a] ‘whereabouts, location’. The most salient acoustic cue to this contrast is the duration of closure, geminates being almost twice as long as singletons. Phonological evidence suggests that geminates and singletons are single consonants, represented by single sets of features, but differing in their representation of structural length, where medial geminates are part of two syllables; i.e., the [t:] in [pat:a] belongs to the coda of the first syllable as well as the onset of the second.

Since duration contrasts are invariably relative (‘long’ is longer than ‘short’, but implies no absolute value), the question we ask here is how listeners process consonantal length in the absence of other acoustic cues. That is, how do they process mispronounced pseudowords which differ from corresponding real words only in consonantal duration? To investigate this question, we used both behavioural and brain-imaging techniques examining the productive word-medial geminate/singleton contrast in Bengali.

Our predictions are as follows: if no deviation in length is acceptable, then the mispronounced nonword primes with the incorrect duration will not activate the real word. If, however, a syllable parsing overlap does play a role in acceptability, we predict an asymmetry. A geminate mispronunciation has an additional coda but no missing syllable units in comparison to the real word singleton, and thus the activation of the latter should not be precluded. In contrast, the parsing of a singleton mispronunciation leads to the building of a coda-less first syllable with the consonant assigned only to the onset of the second syllable, which should be insufficient to activate the real word geminate. Does this difference in syllable structure parsing in fact lead to such a difference in acceptability between those nonwords that are formed by substituting longer segments for shorter ones and vice versa?

Two sets of cross-modal semantic priming experiments were run in Kolkata, India with auditory primes and visual targets (ISI for behavioural: 0msec; ISI for EEG: 250msec). We chose two sets of disyllabic words as auditory primes: lexical singletons with no geminate counterparts, and underlying geminates with no corresponding word with a singleton. Pseudoword primes were created by shortening or lengthening this medial consonant to create the corresponding (fake) geminate or singleton, e.g., [dana] ‘seed’ ~ \*[dan:a]; [duk:<sup>h</sup>o] ‘sorrow’ ~ \*[duk<sup>h</sup>o]. Both ERPs (specifically N400) and reaction times were measured.

<i>Semantic priming: Experiment 1 (SHORT - LONG)</i>					
Condition	Prime	Target	Parsing predictions	RT results (control - test)	N400 results
Singleton (word)	[dana] ‘seed’	[bidʒ] ‘seed’	√	20ms**	low
Geminate (nonword)	*[dan:a]		√	32ms**	low
<i>Semantic priming: Experiment 2 (LONG - SHORT)</i>					
Condition	Prime	Target	Parsing predictions	RT results (control - test)	N400 results
Geminate (word)	[duk: <sup>h</sup> o] ‘sorrow’	[kəʃto] ‘woe’	√	15ms**	low
Singleton (nonword)	*[duk <sup>h</sup> o]		N	3ms	high

Significant semantic priming indicated by faster RTs and lower N400 for real words in comparison to unrelated controls confirms lexical activation. Crucially, however, we also find significant priming and lower N400 with pseudowords, but only when the real word is a singleton. That is, \*[dan:a] primes [bidʒ] and results in a lower N400, but \*[duk<sup>h</sup>o] does not prime [kəʃto]. These results show that a perfect match of consonantal length was not necessary for lexical activation. However, while more information facilitates the recognition of the semantic associate of the real word, less information does not. This confirms our predictions for asymmetric activation due to differences in parsing of the syllable structure.

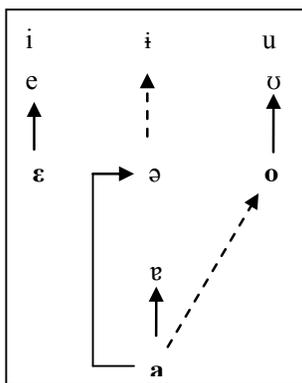
## The evolution of vowel reduction patterns: observation in apparent time

Alexander Krasovitsky  
University of Surrey

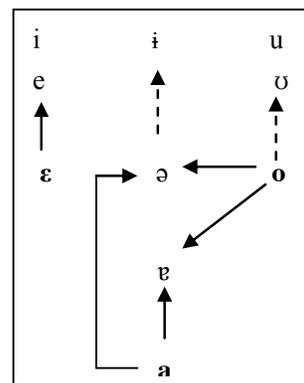
It has been established that languages can synchronically combine several different patterns of vowel reduction which are distributed across different domains within a phonological word. While several - often competing - explanations of this phenomenon have been offered (Crosswhite 2001, 2003; Harris 2005; Barnes 2002), diachronic routes which lead to this situation have received less attention, not least because the relevant data are often unavailable. Recent developments in Russian provide data which can shed light on the emergence and coexistence of vowel reduction patterns.

The study is based on data from North Russian, one of two major Russian regional (non-standard) varieties, recorded in the region of Archangel. The variety in question has undergone massive phonological change, and continues changing rapidly. One consequence of this is significant variation in allophonic processes and in the direction of vowel reduction across different age groups: while a relatively straightforward pattern is attested for conservative older speakers, the speech of the middle and of the younger generations reveals radical deviation from the archaic model.

As (1) shows, the archaic pattern is based on rising with accidental deflections triggered by coarticulation effects (e.g., [a] may move to [o] in labial and velar consonantal context, cf. Ouwayda 2010). This pattern of vowel reduction does not hold in the speech of middle and younger generation, as summarized in (2): low vowels undergo mandatory raising of different degrees, and mid back vowels are subject to centralization or centralization and lowering, which results in systematic neutralization of low and mid-back vowels, previously unattested in North Russian. While there is a tendency for short unstressed syllables to eliminate height contrasts, labialization and backness contrasts are typically much more stable across different languages (Flemming 2005). This claim may be supported by the data from the Archangel dialect under investigation: significant quantitative reduction of unstressed vowels (also a relatively new phenomenon in North Russian) is found both in archaic (non-neutralizing) and in innovative (neutralizing) individual systems. At the same time the analysis of acoustic data (normalized using Lobanov vowel extrinsic method to factor our age-related physiological differences) have revealed that the new pattern may be triggered by radical change in spatial properties of vowels. In particular, standard deviation analysis has shown that articulatory areas of individual phonemes (in stressed syllables) are clearly isolated in conservative systems and draw together in innovative systems, with areas for /o/ and /a/ moving towards the centre. This results in impaired labialization of stressed mid back vowels (Maddieson 1984) and leads to the inability to hold labialization contrasts in unstressed positions. To conclude, the data from North Russian demonstrate that while height contrasts may be eliminated by prosodic processes (e.g. shortening of unstressed syllables), the neutralization of backness and labialization contrasts may reveal structural changes in the architecture of the vowel system in general.



(1) Archaic vowel reduction



(2) Innovative vowel reduction

# English auxiliary contraction and the locus of variability

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A common thread in work on sociolinguistic variation is that variable linguistic alternations are best modelled as probabilistic versions of invariant linguistic processes (Labov, 1969; Cedergren and Sankoff, 1974; Guy and Boberg, 1997). Work in this tradition has explicitly argued against treating variable alternations as the purview of a cognitive system distinct from the grammar; instead, variable and categorical phenomena are both understood to be represented grammar-internally (Weinreich et al., 1968). Motivating this proposal is the observation that variable and categorical phenomena tend to be conditioned by the same sorts of factors (Guy and Boberg, 1997; Coetzee and Pater, 2011). Localising variable and categorical phenomena in different domains would necessitate that the conditioning factors on each would have to be duplicated, resulting in unnecessary redundancy. The preferable alternative is to represent variation grammar-internally.

The present paper accepts this line of argumentation, but observes that not all conditions on variable phenomena lend themselves to a grammatical treatment in this way. This observation is based on data on contraction of the auxiliaries *is*, *has*, and *will* in the Switchboard (Godfrey et al., 1992), Fisher (Cieri et al., 2004), and Philadelphia Neighborhood (Labov and Rosenfelder, 2011) corpora. Auxiliaries were examined after full noun phrase (i.e., non-pronoun) subjects, and each auxiliary's subject was coded for length in words. Contraction of each auxiliary is strongly dispreferred as subjects increase in length (Figure 1).

Crucially, subject length differs from other conditions on variable phenomena because it is not found to condition categorical alternations in the world's languages: there is a common understanding that "grammars can't count". Expanding on the aforementioned proposal that shared conditions on categorical and variable phenomena motivate localising both in the grammar, we put forth the converse: when a variable phenomenon is conditioned by an effect which does **not** condition categorical alternations, that effect must **not** be localised in the grammar. The effect of subject length on contraction, we propose, is one such effect. We close with a discussion of what this subject length effect on contraction may be attributed to, if it is not grammatically-encoded. We propose that the effect may stem from constraints on production planning (e.g. Ferreira, 1991), hypothesising that longer subjects prevent a speaker from planning ahead to the auxiliary, which subsequently inhibits contraction.

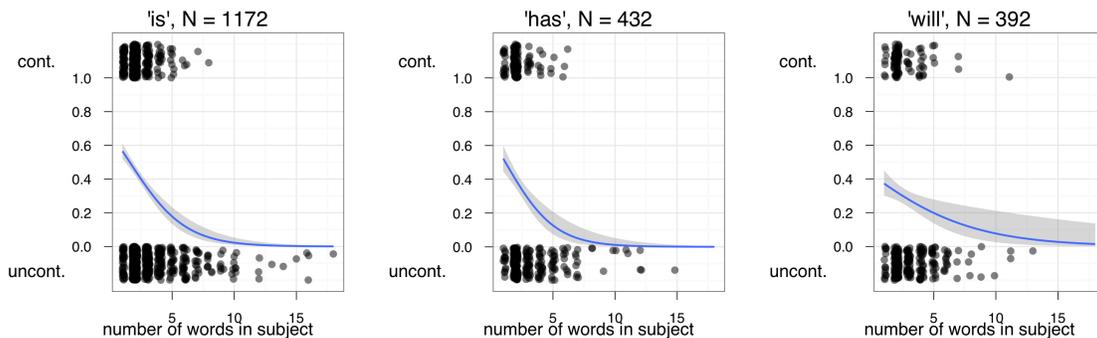


Figure 1: Effect of subject heaviness on contraction of three auxiliaries after non-pronoun subjects. Each point represents one token, coded as contracted (cont.) or not (uncont.). Values on the y-axis are for interpretation of the GLM smoothing line.

## Dependent plurals: a non-cumulative account

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**1. Dependent Plurals.** Chomsky (1975) first noticed that bare plural noun phrases in the scope of other plurals may have a different interpretation from other plural indefinites:

(1) Unicycles have several wheels. (2) Unicycles have wheels.

Sentence (1) states that each unicycle has more than one wheel, which is clearly false. On the other hand, (2) states that every unicycle has *at least one* wheel, which is generally true.

More recently, Zweig (2008, 2009) has proposed a theory of dependent plurality which assimilates it to cumulativity. Under this approach, sentence (3) involving a dependent plural and sentence (4) under a cumulative reading get parallel treatment:

(3) Five boys flew kites. (4) Five boys flew three kites.

**2. Contrasts between Dependent Plurality and Cumulativity.** Zweig's account faces a number of problems. First of all, as Zweig himself points out, dependent plurals have a wider distribution than cumulative readings. For instance, dependent plural readings are licensed in the scope of plural nouns phrases involving quantifiers *all* and *most*, but cumulative readings are not:

(5) Most boys flew kites. (6) Most boys flew ten kites.

Sentence (5), but not (6), is compatible with a scenario where each boy flies a single kite.

Another contrast, to our knowledge previously unnoticed, is that the relation between a dependent plural and its licenser can be mediated by a bound pronoun, while for cumulativity this configuration is ruled out:

(7) Five boys believe that they will get presents. (8) Five boys believe that they will get five presents.

Sentence (7) is compatible with a scenario in which each of the five boys believes of himself that he will get just one present. Sentence (8), on the other hand, has either a non-cumulative distributive reading ('each boy believes of himself that he will get five presents'), or a cumulative reading, but in this case the belief that each boy has must be related to the whole group of five boys ('each boy believes *of the five boys* that they will get five presents'), i.e. the pronoun is not bound. The bound variable cumulative reading is absent in (8).

**3. A Choice-Functional Account.** I assume that each DP can carry two [pl] features: one on the noun itself, and one on the determiner (cf. Kratzer 2007). In indefinites, the plural NP introduces a variable ranging over sets of individuals that has to be existentially bound in a local domain (e.g. the same clause). The [pl] on the determiner is interpreted as a pluralized  $\lambda$ -binder. The null determiner of bare plurals denotes a choice function that returns an element of the indefinite set denoted by the NP. Crucially, it also carries a [pl] feature, but this feature is defective, and must be bound via a syntactic checking relation with a c-commanding plural licenser. Once checked, this [pl] feature is interpreted as the Skolem argument of the choice function denoted by the determiner (cf. Kratzer 1998), semantically bound by the licenser. Under this analysis, example (3) would get the following interpretation:

(3')  $\exists X$ : five (X) & \*boy(X).  $\exists Y$ :\*kite(Y).  $*\lambda x$ . [x flew  $f_x(Y)$ ](X)

Since the choice function is Skolemized, and thus can choose different elements of the indefinite set of kites for each boy, we have an account of the distributive property of the dependent plural. Furthermore, I show that this analysis allows us to overcome the problems pointed out above with respect to the cumulativity-based approach to dependent plurals, with e.g. sentence (7) receiving the following desired interpretation:

(7')  $\exists X$ : five (X) & \*boy(X).  $*\lambda x$ . [x believes that [ $\exists Y$ :\*kite(Y). x flew  $f_x(Y)$ ]](X)



**Singular (in)visibility**  
**Beata Moskal**  
**University of Connecticut**

Suppletion refers to a single lexical item being associated with two phonologically unrelated forms, the choice of form depending on the morphosyntactic context. Consider *good-better-best*: the adjective root is *good* in isolation but *be(tt)* in the context of the comparative (and superlative). Though rare in absolute terms, suppletion is frequently observed across languages (Hippisley *e.a.* 2004). Cross-linguistically, nouns frequently supplete for number (#), but not case (K), as in Ket: the singular forms in (1) have a phonologically distinct root from the corresponding plural forms (cf. regular forms in (2)).

- |     |         |       |     |          |      |                        |
|-----|---------|-------|-----|----------|------|------------------------|
| (1) | SG      | PL    | (2) | SG       | PL   | (Ket; Surrey Database) |
|     | ‘tree’  | o:ks’ | aʔq | ‘mother’ | am   | ama-ŋ                  |
|     | ‘child’ | dy:l’ | kat | ‘knife’  | doʔn | doʔna-ŋ                |

In the Surrey Suppletion Database, 12 out of 34 languages have nouns suppletive for number, but only one noun suppletes for case (see below). Pronouns regularly supplete for number as well as for case (3):

- |     |     |     |                      |
|-----|-----|-----|----------------------|
| (3) | SG  | PL  | (German; 1st person) |
|     | NOM | ich | wir                  |
|     | DAT | mir | uns                  |

In this paper, I argue that the distinct structures of pronouns and lexical nouns interact with locality restrictions, which allows for case-driven suppletion in pronouns but prohibiting it in nouns.

My argument crucially relies on hierarchical structure, and is cast in Distributed Morphology (DM; Halle & Marantz 1993). Features are distributed over nodes subject to Vocabulary Insertion (VI). Suppletion is modeled as (a type of) contextual allomorphy: a feature (set) has a context-free default exponent (5), but in a more specific context a different exponent takes precedence (4) (Bobaljik 2012).

- |  |  |
|--|--|
| (4) $\sqrt{\text{GOOD}} \Leftrightarrow \text{be(tt)} / \_ \text{comparative}$ | (5) $\sqrt{\text{GOOD}} \Leftrightarrow \text{good}$ |
|--|--|

Accessibility as a potential context for VI-rules is restricted by cyclicity (Embick 2010, Bobaljik 2012). In (6), *cyclic* node B induces the spellout (including VI) of its sister A. At VI of A, the spellout node B and one node above it (C) are *accessible* to govern suppletion, but D is not accessible.

- (6) [ [ [A B<sup>cyclic</sup>] C ] D ]

I assume pronouns to be purely functional (Postal 1969, Longobardi 1994), containing D,  $\phi$ -features (#) and case features (K). Instead of D, nouns contain a root and category-defining node *n* (8).

- |                     |                            |
|---------------------|----------------------------|
| (7) <i>pronouns</i> | (8) <i>nouns</i>           |
| [ [ D # ] K ]       | [ [ [ $\sqrt{n}$ ] # ] K ] |

Category-node *n* is a spellout node (Embick 2010). VI is cyclic from the root outwards (Bobaljik 2000). Category-defining *n* triggers spellout of the root, for which # is sufficiently local to govern suppletion. K is not accessible to the root, thus deriving the lack of K-driven suppletion in nouns. Archi provides an apparent counter-example: *abt:u* 'father-ABS' but *ummu* 'father-ERG' (Hippisley *e.a.* 2004); however, this is a *singulare tantum*: the absence of # makes K sufficiently local for suppletion: [ [  $\sqrt{n}$  ] K ].

In contrast, pronouns lack *n*: (7) is a single spellout domain, allowing both #- and K-driven suppletion

Whilst in nouns overtness of realisation of number morphology is irrelevant, with a handful of apparent exceptions discussed in the paper in pronouns a null number morpheme allows for suppletion while an overt number morpheme blocks it. In (9), we observe a suppletive form in the singular *a-niŋ* 'dem.pron.-DAT' but the non-suppletive form in the plural *ol-ar-niŋ* 'dem.pron.-PL-DAT'. In the absence of an overt plural (10), K can govern suppletion: *ama-ta* '3-PL.ERG' (cf. non-suppletive *es-eb-i* '3-PL-NOM').

- |     |     |       |           |     |         |                   |
|-----|-----|-------|-----------|-----|---------|-------------------|
| (9) | SG  | PL    | (Xakass)  | SG  | PL      | (Georgian)        |
|     | NOM | ol    | ol-ar     | es  | es-eb-i | '(3rd psn.pron.)' |
|     | DAT | a-niŋ | ol-ar-niŋ | ERG | ama-n   | ama-ta            |

The irrelevance of overt #-morphology for suppletion in nouns follows from # being in a separate spellout domain from the root. However, pronouns form a single cyclic domain: since D, # and K undergo VI within the same cycle, their exponence is relevant (see Embick 2010 on linear adjacency).

In sum, the different structures of pronouns and nouns interacting with locality correctly predict their divergent behaviour as to K-driven suppletion and (ir)relevance of null #-morphology. This raises the question whether these observations can be captured in frameworks that deny that hierarchical syntactic structure plays a role in morphology.

**Object omissions in Child Polish and Ukrainian**  
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In previous acquisition studies on direct object (DO) realization, most attention has been paid to Romance languages with clitics (Gruter 2006, Castilla & Perez-Leroux 2010, Gavarró et al. 2010). Little is known, however, about the referring choices in other language types. In Slavic languages, such as Polish and Ukrainian (P/U), DOs can be realized as full NPs, pronominal elements, or nulls. Crucially, however, while Polish makes use of clitics in anaphoric contexts and full pronouns in contexts with animate/human contrastive referents, Standard Ukrainian always employs full pronouns. Moreover, some forms present an interesting morphological contrast in these languages: i.e., the 3-pr.sg.masc. pronoun ‘him’ has the full form *joho* in Ukrainian, but it has a reduced form *go* in the same contexts in Polish (see (1)).

(1) *What did Peter do to/with the cat?*

<p><u>Polish:</u> a. <i>On go umył (go).</i>  <i>he him washed (him)</i></p> <p>b. <i>Umył go.</i>  <i>washed him</i></p> <p>c. <i>Umył <math>\emptyset</math>.</i>  <i>washed</i>  <i>‘He washed him’.</i></p>	<p><u>Ukrainian:</u> d. <i>Vin joho pomyv (joho).</i>  <i>he him washed (him)</i></p> <p>e. <i>Pomyv joho.</i>  <i>washed him</i></p> <p>f. <i>Pomyv <math>\emptyset</math>.</i>  <i>washed</i>  <i>‘He washed him’.</i></p>
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This study investigates the use of DO types in specified/anaphoric contexts in P/U in child grammar, which is likely to depend on a range of variations possible in adult speech. We tested effects of language, age, animacy, number, person and gender of referents on DO types. Based on discourse-pragmatic accounts (Allen 2000, Serratrice to appear), we predicted that any referring element might be omitted if it is linguistically specified (i.e., mentioned in previous discourse), and that animate DOs are more likely to be realized as pronouns.

Participants included 48 Polish children (3;1-6;9) and 31 Ukrainian children (3;2-6;7), divided in four age groups. The adult group consisted of 33 Polish and 22 Ukrainian native speakers. The experiment was designed as an elicited production picture description task with questions exemplified in (1), two conditions, and 16 testing items per participant.

The results show that the adult grammar in both languages allows three types of DOs: pronouns/clitics, nulls and NP. The highest use of pronominals (71% & 55%) is detected in Animate contexts for Polish and Ukrainian, respectively. The data also show that omitted DOs are acceptable in adult speech, especially as realization of inanimate referents. Mixed model statistical analyses show significant effect of condition/animacy for Polish ( $p=0.015^*$ ), but not for Ukrainian ( $p=0.416$ ). On the other hand, the statistical analysis for the total adult data reveals no interaction of language and condition. The overall results for children show a general preference for null DOs in both languages. Similar to the adult data, the highest rates of pronominal DOs are detected in Animate contexts: 44% & 36%, while the highest rates of null DOs are found in Inanimate contexts: 64% & 60%. All the age groups of children follow similar patterns, and only 6-year-olds approach the adult level of omissions. Analyses of various morphological forms of DOs in the child data from different age groups reveal no significant difference in the omission rates in two languages.

These findings confirm that the child grammar options stay within the range allowed by the adult grammar, but some variants (i.e., null DOs) could be preferred at early developmental stages. Crucially, however, we did not find a significant effect of language for the considered age groups, which suggests that the morphological properties of DOs can be downplayed in languages that allow discourse-related omissions.

## Distinctiveness of morphological features and syntactic positions

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The phrase structure position of finite verbs varies across languages, as often exemplified by the contrast between French, *Jean embrasse souvent Maries*, and English, *John often kisses Mary*, and the works in generative syntax attribute this type of positional difference to the presence or absence of verb raising (Emonds 1978, Pollock 1989). Descriptively, a correlation between the richness of inflectional morphology and the presence of verb movement has been pointed out, particularly in comparative Germanic syntax. For instance, languages like Icelandic exhibit more complex verb inflectional patterns than mainland Scandinavian languages, so the former locate finite verbs in a functional head while the latter place them in-situ. To account for this descriptive observation, some works posit direct associations between richness of inflectional morphology and syntactic movement (e.g. Rohrbacher 1999), whereas others argue for syntax-oriented approaches in which rich inflectional morphology is regarded as a consequence of split-Inf projections in syntax (e.g. Bobaljik & Thráinsson 1998). This paper aims to give an account for the correlation between inflectional morphology and syntactic verb placement without resort to syntactic operations like movement. Our proposal refers to lexical properties and paradigmatic organisation of verbs in the lexicon and it is formalised within the framework of Lexical-Functional Grammar (LFG).

Our analysis shares the fundamental insights with such work as Koenenman (2000, 2010) and Biberauer & Roberts (2010) in that the syntactic positions of verbs are determined by pre-syntactic word-formation. Those authors argue that, instead of postulating prefabricated complex functional projections, the featural properties of lexical items induce a syntactic movement, namely the compound of tense or agreement features and a verb triggers verb raising to a higher functional head. The present paper, on the other hand, claims that the complex features induce a categorial shift of finite verbs from V to I in the lexicon. Since LFG is a monostratal grammar in which no derivational operation is postulated in syntax, verbs that undergo the categorial shift are directly base-generated in a higher functional head in syntax. However, unlike the previous LFG analyses of verb placement in functional heads (cf. Bresnan 2001), we argue that a systematic association can be postulated between lexical properties of verbs and their categories. In Germanic languages, for example, it is often pointed out that the morphological realisations of person features are relevant to the verb positions (Rohrbacher 1999). This observation is captured by Boolean-valued feature representations of person attributes, i.e. 1st [1 +, 2 -], 2nd [1 -, 2 +], 3rd [1 -, 2-], as exemplified by the Icelandic inflectional pattern in Fig 1. Languages

$$\begin{array}{l}
 \textit{segi} \left[ \begin{array}{l} \text{PERS} \left[ \begin{array}{l} 1 \quad + \\ 2 \quad - \end{array} \right] \\ \text{NUM} \quad \text{SG} \end{array} \right] \quad \textit{segjum} \left[ \begin{array}{l} \text{PERS} \left[ \begin{array}{l} 1 \quad + \\ 2 \quad - \end{array} \right] \\ \text{NUM} \quad \text{PL} \end{array} \right] \quad \textit{segi\ddot{d}} \left[ \begin{array}{l} \text{PERS} \left[ \begin{array}{l} 1 \quad - \\ 2 \quad + \end{array} \right] \\ \text{NUM} \quad \text{PL} \end{array} \right] \\
 \\
 \textit{segir} \left[ \begin{array}{l} \text{PERS} \left[ \begin{array}{l} 1 \quad - \end{array} \right] \\ \text{NUM} \quad \text{SG} \end{array} \right] \quad \textit{segja} \left[ \quad \quad \right]
 \end{array}$$

Figure 1: Paradigmatic organisation of Icelandic *segja* ‘say.INF’

like Icelandic display a full paradigmatic person feature contrast and we argue that such a contrast systematically sets the category of finite verbs as I. Crucially, since our analysis defines the category shift by the properties of each lexical item, it can capture a gradual transition from a V-raising language to a V-in-situ language as often described in the change from Middle English to Early Modern English.

## Object symmetry and Differential Object Marking in Jivaroan languages

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Differential object marking (DOM) has been described as a phenomenon by which a language marks case overtly on some direct objects but not on others depending on the semantic and pragmatic features of the object (Bossong 1985, 1991; Aissen 2003). Whether an object receives marking has typically been claimed to depend on where it stands on an animacy or definiteness hierarchy, with objects at the top of the hierarchy favouring overt marking (*ibid.*). It has also been shown that some languages, such as Finnish, use differential object marking to convey aspectual and modal distinctions (Malchukov & de Swart 2009; Malchukov & de Hoop 2011). This paper discusses a further case of DOM found in Jivaroan languages, and the implications that Jivaroan object marking has for our understanding of DOM as a cross-linguistic phenomenon.

Five closely related Jivaroan languages are spoken in the western Amazon basin in Ecuador and Peru. Morphologically they are suffixing and agglutinating and show both head and dependent marking. Unmarked constituent order is predicate-final, and clause-chaining is pervasive. Grammatical relations centre on Subject and Object, and basically follow accusative alignment. These are manifested through morphological coding (case-marking and verbal indexing) and syntactic behaviour (control of switch-reference and nominalization). Importantly, Jivaroan languages show symmetrical objects: coding properties of all objects (notional direct and indirect objects as well as those added by applicative derivation) are identical, and their syntactic behaviours are similarly symmetrical.

Jivaroan languages show a scenario-conditioned split in accusative case marking (described by Overall 2007 for Aguaruna, and see Witzlack-Makarevich 2011 §8.6 for discussion), whereby third person objects are only marked for accusative case if the subject of the verb is first person singular or third person. Objects remain unmarked if the subject is first person plural or second person. The following minimal pairs are from Shiwiar (Kohlberger, *in prep.*).

- |   |   |
|---|---|
| (1) <i>numi-n</i> <i>atʃi-a-ha-i</i><br>stick-ACC      grab-IMPV-1SG-DEC<br>'I grab a stick.'   | (2) <i>numi</i> <i>atʃi-a-mĩ-i</i><br>stick grab-IMPV-2SG-DEC<br>'You grab a stick.'  |
| (3) <i>aintsu-n</i> <i>hi-a-wa-i</i><br>person-ACC    see-IMPV-3SG-DEC<br>'He sees the person.' | (4) <i>aintsu</i> <i>hi-a-hi-i</i><br>person see-IMPV-1PL-DEC<br>'We see the person.' |

This is unlike canonical DOM (as discussed above) in two respects. Firstly, the conditioning is based entirely on the person of both subject and object, and not on animacy or definiteness. In other words, the conditioning of Jivaroan object marking is entirely based on referential properties and not discourse properties. Nor is it exploited to convey aspectual or modal information.

Secondly, the paradigm cases of DOM (e.g. Spanish) involve a syncretism of dative and accusative case marking, such that all indirect objects receive case marking and only direct objects are differentially marked. In Jivaroan languages this is not the case: all objects are marked identically, and all follow the same pattern of differential marking described above.

The data from Jivaroan languages raises questions about the limits of DOM as a phenomenon. Should the split in Jivaroan object marking be considered the same kind of thing as canonical DOM, even though neither animacy nor definiteness are relevant conditioning factors?

## Choosing what bit? Tone and inflection in Cuicatec

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Some inflectional systems appear chaotic to us when we first encounter them if the inflectional forms we observe do not immediately respond to transparent rules assigning one form per meaning. One way to deal with this chaos is to first believe that there is a paradigm in the structure, and then set off to find and compare the bits across the different forms of many lexemes in order to explain the rules that build it. This often happens when the system at hand is grounded in the interaction of multiple inflectional layers, such as tone and affixes, and the Oto-Manguen languages of Mexico are good examples of such a system. In this paper, we advance a pioneering analysis of the role of tone in the inflection of Cuicatec, an Oto-Manguen language of the Mixtecan branch which has a high degree of morphological complexity. We show that in a chaotic situation, some order can be found if one looks at the right bits.

No previous analysis of Cuicatec inflection exists; we base our analysis on a sample of 620 verbs built on the raw data in the dictionary by Anderson & Roque (1983). A verb's paradigm in Cuicatec consists of the four aspect/mood forms in (1). We focus on verbs with disyllabic forms, as they are the most common (in our sample, 1387 out of 2480 forms). Prefixes can be moraic (1a) or consist of a single consonant (1b). Most forms consist of a stem plus a prefix, but there are also instances of bare stems realizing a given value.

(1)		POT	PROG	COMPL	PRF
a.	sow	ku <sup>4</sup> -nu <sup>4</sup>	yi <sup>4</sup> -nu <sup>4</sup>	chi <sup>4</sup> -nu <sup>4</sup>	ni <sup>4</sup> -nu <sup>4</sup>
b.	swing	k <sup>w</sup> -ʔa <sup>4</sup> ku <sup>4</sup>	∅-ʔa <sup>4</sup> ku <sup>4</sup>	ch-ʔa <sup>4</sup> ku <sup>4</sup>	nd-ʔa <sup>4</sup> ku <sup>4</sup>

Cuicatec is a tonal language (tone is represented by numbers: 1 is highest, 4 lowest), but in the forms in (1), tone adds little to inflection, i.e. all forms remain invariable for tone. However, such verbs are extremely rare in Cuicatec. The common case is to have at least one contrastive form for tone, creating a two-way split. The form in question may be the Completive (2a) or the Perfect (2b), but there are also 3-way splits (2c-d) and 4-way splits, where all four forms are contrastive for tone (2e). The prefixes display considerable tonal allomorphy, but we assume that this variance responds to higher-level prosodic patterns, in such a way that forms such as (2c) and (2d) instantiate the same tonal pattern [3-3/3-3/4-3/2-3].

(2)		POT	tone	PROG	tone	COMPL	tone	PRF	tone
a.	grind corn	k-ʔu <sup>2</sup> ne <sup>2</sup>	2-2	∅-ʔi <sup>2</sup> ne <sup>2</sup>	2-2	ch-ʔi <sup>4</sup> ne <sup>4</sup>	4-4	n-ʔi <sup>2</sup> ne <sup>2</sup>	2-2
b.	spit	k-ʔu <sup>3</sup> nen <sup>3</sup>	3-3	∅-ʔi <sup>3</sup> nen <sup>3</sup>	3-3	ch-ʔi <sup>3</sup> nen <sup>3</sup>	3-3	nd-ʔi <sup>2</sup> nen <sup>3</sup>	2-3
c.	show	k-ʔu <sup>3</sup> mʔi <sup>3</sup>	3-3	∅-ʔi <sup>3</sup> ʔin <sup>3</sup>	3-3	ch-ʔi <sup>4</sup> ʔin <sup>3</sup>	4-3	n-ʔi <sup>2</sup> ʔin <sup>3</sup>	2-3
d.	drip	ku <sup>3</sup> -ti <sup>3</sup>	3-3	yi <sup>3</sup> -ti <sup>3</sup>	3-3	chi <sup>4</sup> -ti <sup>3</sup>	4-3	ndi <sup>2</sup> -ti <sup>3</sup>	2-3
e.	get full	ku <sup>4</sup> -tu <sup>4</sup>	4-4	yi <sup>3</sup> -tu <sup>3</sup>	3-3	chi <sup>4</sup> -tu <sup>3</sup>	4-3	ndi <sup>2</sup> -tu <sup>2</sup>	2-2

When all the bits are put together, the number of different tone patterns across verbs can be daunting. For example, out of the 620 verbs in our sample, there are 114 with a disyllabic form in each of the four cells of the paradigm. These verbs alone display 44 different tonal patterns! Similarly, in these 114 verbs we find 30 invariable verbs like the ones in (1); 20 have the two-way split in (2a) and 20 that of (2b); 33 are like (2c-d) in having a three-way split and only four are like (2e); the rest instantiating other minor patterns. Furthermore, there is not an apparent one-to-one meaning-form correspondence, e.g. formatives [4-4] can be found both for the Completive in (2a) but also for the Potential in (2e), etc.

To disentangle this tonal complexity in a quest for inflectional structure, we propose that one way to deal with this system is to study the distribution of the first tonal formative of each pattern. This has been shown to be relevant in other Mixtecan languages and by applying the same hypothesis to the Cuicatec data we are able to reduce the number of patterns to 13. We suggest that other tonal variation we find could be accounted for as being lexical tone.

## Conditions on ellipsis licensing: evidence from gapping and cleft ellipsis

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Binding judgments have been frequently appealed to in order to determine the constituent structure of sentences, based on the assumption that binding is sensitive to c-command. For example, Condition C has been used as a test to determine the height of extraposed clauses (e.g., Culicover & Rochemont 1990, Fox & Nissenbaum 1999). The contrast in (1) has been taken to show that relative clauses extraposed from a direct object target a position no higher than VP, since extraposition apparently obviates Condition C effects with indirect object pronouns but not with subject pronouns:

- (1) a. \*I sent *her* many gifts that *Mary* didn't like last year.  
b. I sent *her* many gifts last year that *Mary* didn't like.  
c. \**She* invited many people to the party that *Mary* didn't know.  
d. \**She* invited many people that *Mary* didn't know to the party.

In this talk we argue that the contrast in (1) cannot be due to c-command. The basic observation we will discuss is that coreference between a subject pronoun and an R-expression in an object relative *is* possible under certain conditions, as in (2):

- (2) a. And then he did something that Davis has never done.  
b. They did what the Russians always do.

This could suggest either that there is some property of the relatives in (2) that allows them to extrapose exceptionally high, or that the difference between (2) and (1c-d) is not due to a c-command difference, but to some interpretative difference between the relative clauses. We argue that the latter interpretation of the facts is correct, and that what facilitates coreference in (2) is the 'temporal independence' of the relative clause (as expressed by the perfect in (2a) and *always* in (2b)). That c-command is not responsible is shown by the fact that the same subject-indirect object asymmetry occurs with unextraposed relatives, as in (3):

- (3) a. I told *him* that many books that *John* really liked had been thrown away.  
b. ?\**He* told me that many books that *John* really liked had been thrown away.  
c. *He* told me that many books that *John* has always liked had been thrown away.

We will argue that coreference with a c-commanding indirect object pronoun requires the clause containing the R-expression to constitute an independent assertion, while coreference with a c-commanding subject pronoun additionally requires this clause to be 'temporally independent' of the matrix clause. Thus, 'Condition C' involves a number of disparate ingredients: c-command (for single-clause cases), assertion and temporal specification. Our observations are problematic for the idea, commonly found in the recent binding literature, that Condition C follows from an economy condition that permits coreference only if the structure does not permit a variable binding interpretation (e.g., Safir 2004, Reinhart 2006).

## Backward coreference from relative clauses and the nature of Condition C

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One of the obstacles to a unified analysis of ellipsis licensing is that certain types of ellipsis behave exceptionally in various respects. In particular, gapping is unusually stringent in that it requires a preceding antecedent in the same sentence, and neither the antecedent nor the ellipsis site may be embedded (e.g., Lobeck 1995):

- (1) a. (Who insulted whom?) \*Sue ~~insulted~~ John. [obligatoriness]  
b. \*Sue ~~insulted~~ John and Mary insulted Bill. [precedence]  
c. \*Mary insulted Bill and I think that Sue ~~insulted~~ John. [embedding]

Some authors have attempted to solve this problem by reducing the exceptional locality properties of gapping to properties of coordinate structures, as gapping is restricted to coordinate structures (e.g., Lin 2002, Johnson 2009). In this talk, I present evidence against this view and in favour of the idea that gapping is licensed through the formation of a syntactic dependency between the two conjuncts (e.g., Carrera Hernández 2009). The evidence comes from reduced *it*-cleft constructions such as (2), where the antecedent of the reduced cleft is an *if*-clause (e.g., Declerck & Seki 1990):

- (2) a. If there's anything Mary is, it's rude.  
b. If there's anything Mary can do, it's drive forklift trucks.

I show that there are two types of reduced *it*-clefts, one of which – that illustrated in (2) – exhibits the locality properties of gapping aside from the coordination requirement. This suggests (i) that a unified analysis of gapping and (AP/VP) cleft ellipsis should be pursued, and (ii) that such an analysis should not make crucial use of coordination. I present a modified version of Carrera Hernández's (2009) analysis of gapping, according to which the gapped/cleft clause is a categorially specified constituent lacking a lexical address (a '0P'). 0P must thus enter a syntactic dependency with a lexically specified, categorially identical antecedent, and this dependency must obey the usual conditions on syntactic dependencies (c-command, locality, etc.). As well as capturing the locality properties of cleft ellipsis and gapping, the analysis makes correct predictions about the kinds of foci that can appear in reduced clefts cross-linguistically: for example, the fact that German and Russian allow the equivalent of \**If there's anyone that bought anything, it was Bill an apple*. This can be reduced to a structural distinction between English and German/Russian reduced clefts: the former essentially involve gapping into an embedded clause, while the latter do not. The broader implications of the present analysis are that it opens the way to a unified treatment of ellipsis licensing in general: ellipsis always involves a syntactic dependency between two categorially identical constituents, one lexically specified and the other not. In the case of sluicing and VP-ellipsis, the antecedent is a head (C, T respectively; e.g., Merchant 2001); in the case of AP/VP cleft ellipsis and gapping, it is a phrase (CP, TP respectively).

## An experimental study of new-dialect formation

Gareth Roberts

Yeshiva University

Linguistic diversity allows language to serve as a source of reliable social markers (Cohen 2012). Some researchers have suggested that this behaviour may itself drive new-dialect formation (e.g. Dunbar 2003), a view that has found some support in computational simulations (Nettle & Dunbar 1999; Baxter, Blythe, Croft, & McKane 2009). In their phylogenetic analysis of four real-world language families, moreover, Atkinson, Meade, Venditti, et al. (2008) found evidence for short periods of rapid linguistic change in newly formed languages, which they suggested may reflect rivalry between competing groups at the point where languages split.

One well cited case-study of socially motivated language change is Labov's (1963) Martha's Vineyard study, in which the phonetic value of certain diphthongs was found to be associated with attitudes towards outsiders to the island. Nevertheless, Labov has expressed caution as to how broadly its findings can be applied, arguing that the propagation of linguistic variants is usually to be explained in terms of frequency of interaction between speakers (Labov 2001: 191, 506). Trudgill (2004, 2008) argued on the same basis that identity is unnecessary to explanations of new-dialect formation in colonial contexts. Computational simulations, moreover, have shown that linguistic diversity can be achieved without invoking social factors at all (Livingstone & Fyfe 1999; Livingstone 2002).

While it is reasonable to be cautious of invoking social identity as the "first explanatory resource" in new-dialect formation (Coupland 2008: 267), it seems unreasonable to reject it entirely. In particular, as Atkinson et al.'s (2008) findings suggest, it may play an important role in accelerating divergence in certain contexts. However, testing this possibility with real-world languages is problematic. Aside from the amount of time involved in dialect formation, there are a number of confounding variables; furthermore, the two main variables of interest—frequency of interaction and social identity—are typically impossible to disentangle. Computational simulations avoid these problems, but are highly dependent on the researcher's choice of parameters and need real-world validation.

An alternative is to examine real-world human behaviour in the laboratory under full experimental control. Here I present such a study, in which the emergence of new dialects was observed in an artificial language. Twenty groups of four participants played a game that involved negotiating anonymously for resources, using a small artificial language consisting of twenty randomly generated words (e.g. *gibuda*, *wadu*). Two factors were manipulated in a 2×2 design. The first was competitiveness: Participants either worked as a team of four to maximise resources, or were divided into two teams of two. In the latter case, success depended on maximising resources for one's own team, which entailed correctly distinguishing between teammates and opponents. The second factor was frequency of interaction: Each participant would either interact with equal frequency with every other participant, or 50% of the time with one participant only (always the teammate in the two-team condition).

Given 50% interaction between teammates *and* a pressure to mark identity, distinct "dialects" emerged in the artificial language. Neither factor, however, was sufficient on its own. Since the experiment lasted for about an hour, it may be that frequency of interaction alone would eventually have led to divergence; however, the pressure to mark social identity seems to have dramatically accelerated the process.

# How many genders are there in Norwegian? Evidence from monolingual acquisition of the Tromsø dialect

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Like standard Norwegian, the traditional Tromsø dialect has a three-gender system, distinguishing between masculine, feminine, and neuter. The present study considers empirical evidence suggesting that a language change is underway and that the feminine is disappearing from the gender system. Some indications of this change in child language have recently been reported by Gagliardi (2012) and Rodina & Westergaard (2013), who show that masculine is frequently overgeneralized with feminine nouns by children (mean ages 6;8 and 4;4).

In order to investigate the status of feminine nouns in the Tromsø dialect more closely, we have conducted an elicited production experiment with 15 monolingual children (age 3;6-6;0, mean age 4;8). The task was designed to elicit indefinite and double definite DPs: In indefinite DPs (1), feminine is marked on the indefinite article *ei*. In double definite DPs (2), the prenominal determiner *den* is an exponent of common gender (masc+fem), while feminine is marked on a bound definite article *-a*. In recent analyses of Norwegian, the definite article has been argued to be a declension marker rather than an expression of grammatical gender (cf. Enger 2004 based on diachronic evidence, Lødrup 2011 based on corpus data from the Oslo dialect, and Rodina & Westergaard 2013 based on spontaneous child data). Thus, another goal of our study was to provide further evidence regarding this issue.

- (1) *ei grønn såpe* (a.F *green soap*)<sub>(F)</sub> ‘a green soap’                      (2) *den grønne såpa* (that.COMM *green soap*)<sub>(F)</sub> ‘the green soap’

In Norwegian, there are very few semantic and/or phonological gender cues; however, two relatively strong cues are used to assign feminine, viz. nouns denoting female humans and nouns ending in *-e* (cf. Trosterud 2001, Gagliardi 2012). Our elicitation task had four conditions: nouns denoting females and inanimate nouns ending in *-e*, as well as nouns denoting females and inanimate nouns that do not have this ending. The results presented in Table 1 show that the feminine indefinite article *ei* is used roughly 20% of the time across all four conditions. In other cases there is massive overgeneralization of masculine *en*. Masculine *en* is also overgeneralized with neuter nouns that were used in the task as fillers, but considerably less frequently, as the neuter *et* is used appropriately 74% of the time. On the individual level, the feminine indefinite article occurs in the speech of seven children across all age groups. Thus, the children do not seem to be sensitive to any of the gender cues and feminine agreement is virtually non-existent in their production. On the other hand, the feminine suffix *-a* is used more than 90% of the time in all four conditions. The masculine suffix *-en* is overgeneralized occasionally, but it is not characteristic of any of the noun groups. Finally, gender marking on the prenominal determiner (expressing common gender) is nearly error-free. Based on this evidence we argue that the Tromsø dialect is undergoing a change towards a two-gender system, consisting of common and neuter, which has recently also been attested in Oslo (Lødrup 2011). We argue that the reason for this is the morphological similarity between certain masculine and feminine forms as well as substantial influence of other Norwegian dialects in Tromsø. Furthermore, these data support previously made observations that the suffixed definite article, which in our study is used appropriately (in contrast to the indefinite article), expresses declension class, but not grammatical gender.

**Table1. Feminine gender marking in indefinite and double definite DPs: %correct (N/Total)**

	Females <i>-e</i> <i>dame</i> ‘lady’	Females $\emptyset$ <i>heks</i> ‘witch’	Inanimate <i>-e</i> <i>såpe</i> ‘soap’	Inanimate $\emptyset$ <i>bok</i> ‘book’
<b>Indefinite article</b>	21% (29/136)	23% (32/140)	18% (29/158)	17% (25/147)
<b>Determiner</b>	99% (75/76)	92% (70/76)	97% (84/87)	99% (83/84)
<b>Suffix</b>	92% (56/61)	93% (66/71)	93% (68/73)	97.5% (78/80)

## Aspects of the categorization of nonfinite verbs in Gújjolaay Eegimaa

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This paper investigates the semantic principles underlying the categorization of nonfinite verbs with different noun classes/genders markers in Gújjolaay Eegimaa (Atlantic, Niger-Congo). Studies in Niger-Congo noun class system show that nonfinite verbs are formed by combining noun class prefixes with verbal stems. This process can be regular as in Bantu languages where infinitives are generally formed with class 15 (Maho 1999), or irregular as in the Northern Atlantic language Jóola Fogny, for which Sapir (1965) reports the existence of two phonologically based regular infinitive markers and six other irregular ones. Eegimaa, another Jóola language spoken in Southern Senegal, has the typologically unusual property of forming nonfinite verbs in an irregular fashion from ten out of fifteen classes by using the same category markers for both nouns and verbs. Two main observations can be made in the formation of Eegimaa nonfinite verbs. In the first instance, more than one noun class marker can be used with the same verbal stem with semantic differences as it is the case with *e-* and *ba-* in example (1) and (2). In example (1) the prefix *e-* is preferred with a singular object whereas a plural object is preferred with *ba-* as exemplified in (2). Another difference in the use of these two prefixes is that while example (1) would be ungrammatical without an object, example (2) would be grammatical, and would mean ‘draining continuously’.

- (1)    ban       i-kke       **e**-fas       ñi-hin       ñañu  
      IMM.FUT  1SG-go     CL3-drain    CL12-plot.of.rice.field  CL12:DEF  
      ‘I am going to drain the plot of rice fields’
- (2)    ban       i-kke       **ba**-fas       u-hin       wawu  
      IMM.FUT  1SG-go     CL5-drain    CL6-plot.of.rice.field  CL6:DEF  
      ‘I am going to drain plots of rice fields’

In the second and most common instance of nonfinite verb formation in the language, a verb root can only combine with one prefix as exemplified in (3) with the *ba-*. However, when the alternations described above are possible, one of the two prefixes is always *e-*, whereas the second one can be any one of the prefixes attested with nonfinite verbs.

- (3)    na-hal-e       **ba**-paj/ \**e*-paj  
      3SG-stop-PFV    CL5-count.and.capture.game  
      ‘S/he has stopped playing the count and capture game (kind of board game)’

This paper investigates the alternation between prefixes *e-* and *ba-* in the formation of nonfinite verbs in Eegimaa. I will focus on dynamic verbs and argue that verb stems combine with *ba-* to describe inherently distributive events which express multiplicity of action (cf. (3)) and/or participants (cf. (2)), whose individuated occurrences are expressed with *e-*.

I will show that the semantic distinction made by the alternations between *e-* and *ba-* can be captured by Hopper and Thompson’s (1980) ‘High’ and ‘Low’ transitivity hierarchy hypothesis. In Hopper and Thompson’s definition, taking an object is only one of the components of transitivity. High transitivity according to this hypothesis, typically includes two or more participants and describes telicity, punctuality, total affectedness and high individuation of the object (cf. *e-* in example 1), whereas low transitivity would typically be more compatible with one participant and includes atelic and non-punctual meanings as well as non-affectedness and non-individuation of the object (cf. *ba-* in example 2 and 3). I will conclude by arguing that there are correlation between the use of *ba-* as a diminutive collective for nouns and its use with verbs to describe inherently distributive events which are composed of smaller individual actions.

## In-Situ and Left-Peripheral Contrastive Focus in Italian

Vieri Samek-Lodovici

UCL

I will claim, contra Rizzi (1997, 2004) and Belletti (2001, 2004), that Italian contrastive focus (CF) occurs in-situ. I will also provide new evidence that left-peripheral instances arise from the extraction of CF from discourse-given phrases targeted by right-dislocation (RD), as explained later below.

As I will show, the availability of in-situ CF is supported by sentences like (1) where the obligatory presence of neg-concord shows that the focused negative object is c-commanded at surface by the preceding negation and hence located lower than T (Zanuttini 1991, Cardinaletti 2001, Penka 2011). A left-peripheral analysis is excluded because it would require the rest of the clause to remnant-move to a position before the object from which the surface c-command relation between negation and the negative object required by neg-concord cannot obtain.

- (1) Gianni non ha visto NESSUNO<sub>CF</sub>.  
*John not has seen nobody*

I will also show that local movement to a lower TP-internal focus projection is excluded. I'll do so by examining new data like (2) and (3) below involving a negative subject that cannot undergo RD and must thus be located in-situ. When used as replies to statements like 'nobody invited the Venetians' both sentences involve a focused object. Crucially, the object may follow the subject in accord with in-situ focalization, see (2), but not move above it as would be required by movement to a TP-internal focus projection above VP, see (3). (Stress in capitals.)

- (2) No. Non ha invitato nessuno i l MILANESI<sub>CF</sub>.  
*no. not has invited nobody the Milanese*  
'No. Nobody invited the MILANESE.'
- (3) \* No. Non ha invitato i MILANESI<sub>CF</sub> nessuno.

I will also argue, joining Samek-Lodovici (2006), that left-peripheral focus is a side-effect of RD, a well-known process that moves discourse-given phrases clause-finally (Cecchetto 1999, Cardinaletti 2002). Foci generated in a discourse-given phrase – as is possible given Schwarzschild (1999) – raise immediately above it before the latter undergoes RD. Since RD affects phrases of any category, left-peripheral foci should be found before phrases of different category, not just Samek-Lodovici's TPs. I'll present new data that confirm this prediction and the overall analysis. See for example (5)-(7) below, where the focused PP 'da Roma' respectively precedes the right-dislocated PP, VP, TP originally containing it in (4). Support for their right-dislocated status comes from the intonational break and pause preceding them and their inability to host negative phrases licensed by pre-focal negation.

- (4) [Siamo [andati [via [da Firenze]]].  
*(We) are gone away from Florence.*  
'We went away from Florence.'
- (5) Siamo andati [da ROMA]<sub>CF</sub>, [PP via]<sub>RightDisl.</sub> (non da Firenze).
- (6) Siamo [da ROMA]<sub>CF</sub>, [VP andati via]<sub>RightDisl.</sub> (non da Firenze).
- (7) [Da ROMA]<sub>CF</sub>, [TP siamo andati via]<sub>RightDisl.</sub> (non da Firenze).

Finally, I will examine the theoretical consequences of the proposed analysis, including how the presence/absence of RD straightforwardly accounts for the subtle interpretative differences distinguishing left-peripheral from in-situ foci in Bianchi & Bocci (2012) and pre-focal from post-focal topics in Frascarelli & Hinterhölzl (2007).

## Towards a primate linguistics

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Jean-Nicod/NYU, Ecole Normale Supérieure, University of St. Andrews, Université de Rennes, Université de Cocody, Université de Neuchâtel, University of Vienna and Université Paris-Dauphine

We will argue that field studies of alarm calls in recent primatology have produced such detailed data that they should now be studied with the methods of formal semantics. By way of example, we will discuss male Campbell's monkey alarm calls, which were shown in Ouattara et al. (2009a,b) to have four roots (*boom*, *krak*, *hok*, *wak*), one suffix (-oo), and a partly rule-governed syntax. Working with experimental data from the Tai forest (Ivory Coast) and Tiwai island (Sierra Leone), we develop formal models of the call meanings, and argue that in one case, the same alarm call is interpreted differently in the two communities. We conclude that either (a) part of the meaning is learned, or (b) the meanings are entirely innate, but environment-dependent. Either way, the semantics of alarm calls is more sophisticated than might have been thought. While we make no claim about the phylogenetic relation between monkey calls and human language, the issues that arise and the methods we use to address them will be very familiar to linguists. In the case at hand, one of the main questions is what is innate and what is learned in monkey calls; and our methods primarily rely on a simple model-theoretic semantics, combined with heavy use of competition principles – formally analogous to scalar implicatures – among possible calls. We thus believe that this field might gain from a collaboration between primatologists and linguists in general and formal semanticists in particular, and we will sketch some directions for future collaborations.

**Open questions in the study of theticity**  
**Eva Schultze-Berndt and Jenneke van der Wal**  
**University of Manchester and University of Cambridge**

Despite a considerable body of research in the last decades, the identification and delimitation of “thetic” (‘all-new’, ‘topicless’, ‘sentence focus’) constructions – associated with “out of the blue” contexts, as illustrated in (1) – still presents considerable difficulties.

- (1) *E' arrivata una piacevole notizia* (Italian)  
is arrived a pleasant piece.of.news  
'A pleasant bit of NEWS arrived' (Sornicola 1995: 108)

One of the difficulties is that crosslinguistically and even within a single language, there exist various strategies to express a thetic sentence. Another difficulty for the identification of thetic structures lies in the frequently observed multiple use of one strategy, such as subject accenting in English illustrated in the translation of (1), which is employed to express both theticity and argument focus. Research still falls short in (i) identifying thetic strategies in linguistic descriptions, (ii) identifying conceptual subtypes of thetic sentences, (iii) finding links between these subtypes and the various strategies, (iv) defining theticity with respect to other information structural notions, (v) developing diagnostic criteria for the identification of thetic structures, (vi) determining to what extent the strategies are dependent on general properties of the language, lexical constraints (such as unaccusativity) or pragmatic restrictions (e.g. definiteness), rather than the discourse function of the thetic sentence type in question, and (vii) the internal structure of thetic sentences.

With respect to (vii), it has been proposed that what unites all thetic strategies is the salient absence of a bipartite division of clauses into a Topic and a Comment, termed “desubjectivization” by Sasse (1987: 24) and “Principle of Detopicalisation” by Lambrecht (2000). Conversely, it has also been argued that some or all thetic structures have a locational or “stage” topic which may or may not be overt (e.g. Gundel 1974, Babby 1980, Erteschik-Shir 1997:241, McNally 1998). The presence/absence of a topic (expression) is hence one of the issues in theticity that are still under debate. More generally, it has been observed that “we still don’t know how informationally complex a thetic structure can be, nor even how to pose such a question in a precise way” (Leonetti 2008: 155). The problem is particularly salient in the case of what Lambrecht (1988) has termed “syntactic amalgamates” of the type *there was a farmer had a dog*. While these structures are non-standard in English, they are comparable to a salient construction type in French illustrated in (2), and also to expressions in English with two prosodic peaks (as in the translation of (2)). They are sentence-focus constructions with respect to their discourse function, but do not correspond to the prototypical thetic construction in that they contain a constituent which introduces a new referent into the discourse context which simultaneously serves as the topic of a regular predication (Lambrecht 2000: 655; Wehr 2000).

- (2) *qu'y-a-t-il donc? – C'est la Palmyre qui a une attaque!* (French)  
what's.the.matter PART it:is DEF P. who has a fit  
'What's the matter? – PalMYRE's had a FIT!' (Zola, *La Terre*; Wehr 2000: 262)

The proposed themed session aims at both deepening and broadening our understanding of thetic constructions by featuring 5 comparative, cross-linguistic studies – some on lesser known languages or varieties – addressing these issues. The focus in most of the papers on differences in thetic strategies in a range of either genealogically or geographically related language is particularly suited to the development of a more fine-grained mapping of formal and functional aspect of thetic sentences. We would like to add a 6<sup>th</sup> 45 min slot for discussion, as we feel that the presentations and indeed the topic itself will spark more questions and academic discussion.

**Social cognition and the origin of language**  
**Robert Seyfarth**  
**University of Pennsylvania**

## Phonological 'wildness' in early language development: exploring the role of onomatopoeia

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Onomatopoeic forms are often disregarded from the phonological analysis of infant data (e.g., Fikkert & Levelt (2008)), seen as a temporary and irrelevant aspect of the developing lexicon which is superfluous to the adult speech model of Indo-European languages. However, onomatopoeic forms often constitute an important portion of infants' earliest word forms in a range of languages (Menn & Vihman (2011)) despite their limited role in most adult lexica. These are thought to provide a linguistic scaffold in language development through the perception of phonologically 'wild' segments (Rhodes (1994)): wildness in the input, whereby the vocal tract's full capacity is used in order to approximate sounds of non-human origin, is found to serve as an attention-marker, as well as aiding phonological recall in production.

Eye-tracking and preferential-looking procedures have been used in various studies to test the sophistication of young infants' linguistic knowledge (e.g., White & Morgan (2008), Swingley & Aslin (2000)), and have proved to be an effective method of analysing infants' perception of language. Based on these findings, the present study interrogates the role of the salient prosodic segments in infant-directed speech (IDS), comparing 14 to 16-month-old infants' reactions to 'wild' (prosodically salient) forms versus 'tame' forms (forms produced within the phonological conventions of the target language) in the input. An eye-tracking procedure was used to analyse infants' perception of these forms, making it possible to determine a potential basis for the prominence of onomatopoeia in early word forms: are they prosodically motivated due to the salient features of onomatopoeia in IDS (Keren Portnoy *et al.* (2009-2010)), or do infants perceive onomatopoeic word forms on a phonological level?

Infants were tested using onomatopoeic forms in both familiar and unfamiliar languages, presented in either a phonologically 'wild' or 'tame' manner. Paired images of familiar animals were displayed on a screen, and an onomatopoeic word form matching one of the animals was played over an audio device. Response times and eye movements were measured to investigate which forms were most recognisable to the infant, based on a scale of phonological similarity across onomatopoeic forms in the four languages used in the study (see Table 1 for an example). It was hypothesised that 'wild' onomatopoeic forms in both familiar and unfamiliar languages would elicit a quicker and more accurate response than 'tame' forms, based on the assumption that infants would perceive most accurately those words which were most salient, either in the familiar language or with a high similarity in an unfamiliar language. Salience has been shown to play a critical role in pre-linguistic infants' speech perception in IDS (e.g. Cooper & Aslin (1990)), but could also be linked to production, thereby revealing the relevance of onomatopoeic forms in language development. Indeed, the 'wild' versus 'tame' paradigm highlights the contrast between prosodic and phonological learning, reflecting which of the input's linguistic queues are most pertinent in early language development.

<b>Swedish</b>	/bɛ:bɛ:/	/kukəliku/	/kvakvak/	/mu:/	/mja:w/	/vɔvɔv/
<b>Chinese</b>	/me:me:/	/ɔʔɔʔɔ:/	/gaga/	/mɔ:/	/mi:'aɔ/	/wʌŋwʌŋ/
<b>Similarity</b>	2	1	1	1	6	4

Table 1: Phonological similarity between onomatopoeic forms in Swedish and Chinese, on a similarity scale where 1 is low and 6 is high similarity

## Evidence for second position cliticization within a word

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**Problem:** Reports of endoclitisis (cliticization within a word) in unrelated languages such as Udi (Harris 2002) and Pashto (Tegey 1977) challenges the widely held view that cliticization can only target phrasal categories, and not a word internal position, Anderson (1992) *inter alia*. In this paper, we present evidence from two Udi (Northeast Caucasian) and Sorani Kurdish (Indo-Iranian) with extremely complex cliticization patterns, showing that in second position cliticization to a word internal second position needs to be recognized as a theoretical possibility.

**Udi:** Harris (2002) shows that clitics in Udi vary between being clitics and endoclitics. Clitics appear enclitic to (i) certain tense/aspect/mood (TAM) suffixes, (ii) focused constituents, (iii) predicate nominals or (iv) endoclititic within the verb. (i - iv) are strictly ranked, with clitics only targeting focused constituents if the relevant TAM suffixes are not present and so on. In addition to the theoretical challenge of accounting for cliticization within a word, endoclititicization within the verb is a complex pattern in and of itself, with the clitic appearing at times either between an incorporated element (1a) and the verb, or within the verb root itself (1b):

- (1) a. nana-n buɣa=ne=b-e p'a ačik'alšey b. kaɣuz-ax a=z=q'-e  
mother-ERG find-3SG-DO-AORII two toy letter-DAT receive-1SG-receive-AORII  
'Mother found two toys.' 'I received the letter.'

We show that once various morphotactic considerations are taken into account, the distribution of endoclititicization in Udi is controlled by (2), which acts as a default placement rule in the language. Endoclititicization in (1a) falls out from this rule, but (1b) does not at face value.

(2) Elsewhere, SM is second position within the complex head containing V<sup>0</sup>.

(1a) is shown to involve displacement of the clitic from its original attachment site due to a morphotactic requirement that the verbal root appear adjacent to its TAM suffix. Since second position placement interrupts this adjacency, Udi repairs the configuration by morphological metathesis leftwards positioning the clitic inside the verbal root, or rightwards to a position outside the TAM suffix if the root is too light phonologically (C or CV) to support the clitic, (3):

- (3) bi-esa-zu  
die-PRES-1SG  
'I am dying'

**Sorani Kurdish:** Sorani Kurdish is also shown to involve second position placement within a verb, similar to Udi. Samvelian (2007) shows that clitics in Sorani Kurdish target second position within the VP, however when the sentence consists of a standalone verb and inflectional affixes, clitics can appear in second, third or fourth position (Walther 2012). The placement in third and fourth position is however predictable from morphotactic considerations. Clitics (indeed anything) cannot divide the verb from participle markers (4a), and clitics that are 3sg must follow object agreement (4b), both forcing third position placement. When both categories are present, fourth position of the clitic is forced:

- (4) a. nârd-uw=tân-in b. nard-in=î c. xward-bû-in=î  
send.past-pp=2pl-3pl send.past-3pl=3sg eat.past-part-3pl=3sg  
'You have sent them' 'He sent them' 'He had eaten them.'

**Consequences:** In addition to simplifying the complex distribution patterns of both Udi and Sorani Kurdish, the above data shows that we need to recognize that word-internal cliticization as a theoretical possibility. Treating the above cases as context dependent affixation (i.e. not cliticization) misses the observation that the morphemes in question do not exhibit categorial selection, show second position placement and depart from second position only due to independent factors, all widely attested characterizations of clitics versus affixes (see Legate 2008 on the final point with reference to Warlpiri). The paper further shows that all the restrictions are morphological in nature, and not phonological, adding support to Arregi & Nevins' (2012) analysis of Basque where morphological surface displacements repair morphotactic violations.

## Allostems and inheritance

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University of Essex

Since Aronoff (1994) the morphomic stem has played an important role in inferential-realizational models of morphology. Stump (2001, ch6) shows that two independent notions of stem are required for Sanskrit ('Indexing Autonomy Hypothesis'). One is defined in terms of morphophonology (Vr̥dhi, Guṇa, Zero) the other is purely morphomic (Strong, Middle, Weakest), distributed by paradigmatic selection. However, the distribution of stem variants ('allostems') can also be determined morphophonologically ('syntagmatic selection'), e.g. we might imagine a language in which *k/g*-final stems have *tʃ/dʒ*-final alternants before all and only front vowel suffixes. More often, we find that allstem distribution is conditioned in part morphologically and/or lexically.

All Slavic languages show sets of allstem variation defined by 'palatalization' of stem final consonants, some of them productive. We can distinguish: Coronal Pal. (/t~c/, COR PAL), Iotation (/s~ʃ/, IOT), Labial Pal. (/p~pj/, LAB PAL); 1st Velar Pal. (/k~tʃ/, 1VP), 2nd Velar Pal. (/k~ʦ/, 2VP). These relations show only limited m-p conditioning and cannot be handled by regular phonology (Rubach and Booij 2001, Gussmann 2007). I show that their distribution has to be defined in terms of a default inheritance hierarchy. Thus, throughout Slavic, in all the morphosyntactic contexts which trigger IOT of coronals we find 1VP of velar finals, but not vice versa. Thus, for Czech we have:

1. COR PAL contexts trigger 1VP by default (2VP in 2VP contexts)
2. LAB PAL contexts trigger COR PAL
3. LAB PAL contexts trigger 1VP by default (2VP in 2VP contexts)
4. IOT contexts trigger 1VP
5. IOT contexts trigger COR PAL of /r, n/

Statements (1, 2) entail (correctly) that LAB PAL contexts trigger 1VP of velars. These dependencies cut across word classes, e.g. 1VP is triggered in the vocative case and denominal adjective derivation, in finite verb inflection, secondary imperfective formation and deverbal derivation, and in comparative/superlative forms of adjectives. They are valid for allostems distributed purely phonologically but in most of these cases the stems' distribution is phonologically opaque and can only be defined morphosyntactically, i.e. the stems are morphomic. Yet the stem classes have to be indexed in terms of their morphophonological shape, otherwise it would be impossible to state the (often exceptionless) inheritance relations.

Such asymmetric dependencies, while very robust, are treated as completely accidental in all current accounts. They pose serious problems for Distributed Morphology, because that architecture doesn't countenance stems in the first place. Embick & Halle (2005) argue that only roots and readjustment rules are required. Aronoff (2012) points out serious flaws if this approach is applied to French irregular verbs. The Slavic stem dependencies, being more regular, pose even more serious problems for a DM stem-less architecture.

# The syntactic representation of collective plurality

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**1. Introduction.** I argue for a syntactic representation of plurality in Collective Noun (CN) DPs. I take Sauerland's (2004) reanalysis of earlier work on British English as a point of departure, before extending the proposal to Lebanese Arabic. In British English, if a CN causes plural agreement, scope inversion (1) and existential sentences (2) are disallowed:

- (1) a. A Northern team **is** likely to be in the final ( $\checkmark \exists \succ \text{likely} ; \checkmark \text{likely} \succ \exists$ )  
 b. A Northern team **are** likely to be in the final ( $\checkmark \exists \succ \text{likely} ; * \text{likely} \succ \exists$ )
- (2) There **is**/\***are** a committee meeting in that room

Sauerland suggests an operator may be applied to a CN DP, mapping its interpretation from singular to group. As the operator is type  $\langle e, e \rangle$ , it gives a CN a definite interpretation. (1) & (2) then follow from definiteness effects: Fox's (2000) scope economy shows definite subjects do not reconstruct at LF, while definites are prohibited in expletives (Milsark 1974).

**2. DP plurality.** I propose Sauerland's operator to be a plural head '#' adjoined to a CN's DP layer. As such, # is visible to DP-external agreement, but too high for internal agreement. This is seen in the inability of CNs to take plural demonstratives: D probes down to singular NP.

- (3) \*These team will receive awards  $\left[ \text{DP} \left[ \text{DP} \text{These} \left[ \text{NP} \text{team} \right] \right] \# \right]$  will ...

**3. Structural mismatches.** Smith (2012) notes that if a CN causes different agreement at two positions in a structure, a singular element may c-command a plural, but not vice-versa:

- (4) a. ?The government **has** offered **themselves** up for criticism ( $? \text{SG} \succ \text{PL}$ )  
 b. \*The government **have** offered **itself** up for criticism ( $* \text{PL} \succ \text{SG}$ )

Assuming anaphors agree with a c-commanding antecedent's phi-features, the anaphors in (4) agree with the CN before the CN subject-raises, causing T agreement. Under my proposal, # is adjoined to CN's DP when it is first merged in SpecVP, creating a new, higher DP node. Raising the CN can then target the higher DP node, containing # (deriving PL>PL), or the inner DP node, excluding #, deriving (4a). (4b) is underivable as # is adjoined prior to raising.

- (5)  $[\text{DP} \text{The government}]_i$  **has** offered  $[\text{DP} \text{the government}]_i$  # **themselves** up for criticism

When a CN moves cyclically, # can be stranded. In (6) the outer DP node raises to an intermediate position, before the inner DP is raised higher. The full paradigm of examples with three agreement relations (7) confirms a plural element never c-commands a singular.

- (6) ?The committee **has** declared **themselves** to be responsible for **their** failures ( $? \text{SG} \succ \text{PL} \succ \text{PL}$ )  
 (7)  $\checkmark \text{SG} \succ \text{SG} \succ \text{SG}, ? \text{SG} \succ \text{SG} \succ \text{PL}, ? \text{SG} \succ \text{PL} \succ \text{PL}, * \text{SG} \succ \text{PL} \succ \text{SG}, \checkmark \text{PL} \succ \text{PL} \succ \text{PL}, * \text{PL} \succ \text{PL} \succ \text{SG}, * \text{PL} \succ \text{SG} \succ \text{SG}, * \text{PL} \succ \text{SG} \succ \text{PL}$

**4. A related plural.** Lebanese Arabic (Ouwayda 2012) ditransitives show another asymmetry. If an indirect object DP has a plural-marked adjective, a coindexed possessive DP in a PP complement must be plural. If the adjective is unmarked, the PP may be singular or plural.

- (8) a. sa'alt tleetiin walad? mnazzam-**iin** an mashrou?**-on** / \***-uh**  
 I. asked thirty child organised-**PL** about project-**their**<sub>PL</sub> / \***his**<sub>SG</sub>  
 b. sa'alt tleetiin walad? mnazzam- $\emptyset$  an mashrou?**-on** / **-uh**  
 'I asked thirty organised children about their project(s)'

# may be merged to two DPs here. Merging # only to the possessive gives a collective reading (the children have a joint project). Plurality here is due to this reading rather than agreement. The example is grammatical as # is absent from the IO (the adjective is unmarked). Merging # to the IO DP, though, - the goal of the possessive's agreement - entails plurality in both DPs.

**5. Conclusion.** Merging # to a DP that is either in its initial position, or that is a goal for agreement can lead to agreement mismatches associated with collective plurality. Agreement mismatches of other phi-features constitute grounds for further development of the proposal.

## **Feathered primates? Communication rules in avian vocalisations**

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Although not closely related to humans, many birds possess sophisticated vocal communication systems that share a remarkable number of parallels with human language. In this paper, I will provide an overview of avian communication, describing the different types of signals that birds use to communicate, as well as the function of these signals and the diversity of approaches for vocal learning across species. I will then provide case studies focusing on three specific signaling systems: alarm calls in chickadee flocks, territorial song in male sparrows, and vocal duetting in mated pairs of wrens. Each system depends on specific underlying rules that govern the production, combination, and interactive use of these vocalizations. I will discuss these different structural rules in order to draw parallels between avian communication and human language.

## Russian Ditransitive Constructions and the canonical order of objects

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The nature of the canonical order of Russian objects has been a matter of continuous debate in the linguistic literature. While Bailyn (2010) defends the hypothesis that O-IO is the canonical order of Russian objects and backs it up with data involving instrumental secondary predicates, reciprocal and variable binding, as well as scope, Dyakonova (2007) uses evidence from idiom formation and topicalization to argue for the opposite view. The disagreement results from the fact that both orders seem to be freely available in Russian (see (1)). That is, while in a narrow focus context, as in (2), information-structural encoding may disrupt the canonical order of objects by licensing clause-final focus, removal of such a license should result in canonical orders, seemingly contrary to fact (see (1)).

1. [What happened?]<sub>CONTEXT</sub>
  - a. [FOC Ivan peredal agentu **špiòna**] SVIOO  
 Ivan handed agent.DAT spy.ACC  
*'Ivan handed a spy to the agent.'*
  - b. [FOC Ivan peredal špiona **agèntu**] SVOIO  
 Ivan handed spy.ACC agent.DAT  
*'Ivan handed the/a spy to the/an agent.'*
2. a. [Who did Ivan hand the/a spy to?]<sub>CONTEXT</sub> SVIOO  
 Ivan peredal špiona [FOC **agèntu**]  
 Ivan handed spy.ACC agent.DAT  
*'Ivan handed the/a spy to the/an agent.'*
  - b. [Who did Ivan hand to the/a agent]<sub>CONTEXT</sub> SVIOO  
 Ivan peredal agentu [FOC **špiòna**]  
 Ivan handed agent.DAT spy.ACC  
*'Ivan handed the/a spy to the/an agent.'*

In this talk I argue that the canonical order of Russian objects can be established by removing the interpretative license for scrambling as long as all the interpretations capable of licensing scrambling are taken into consideration. I show that the relevant interpretations are ranked with respect to each other, as indicated by their position on the hierarchy in (3), with only one of them regulating the order of objects in a given sentence. That is, whenever a higher-ranked feature in (3) is operative, it overrides all the lower-ranked features and either licenses a scrambled order or disallows it. However, when a higher-ranked feature is inoperative, i.e. the objects carry equal values as regards this feature, a lower-ranked feature can regulate the order of objects. Thus, the highest-ranked <±presupposed> feature that distinguishes background/presupposition from focus regulates the order of objects in (2), with the <+presupposed> object preceding the <-presupposed> object. As it is inoperative in (1), only the canonical order is possible unless a lower-ranked feature licenses a scrambled order. If we consider the interpretation of objects in (1) as regards the <±referential> feature that distinguishes definite/specific arguments from non-specific indefinites, we will see that in (1b) both objects allow for either definite/specific or non-specific indefinite interpretation, whereas in (1a) the indirect object must be definite/specific and the direct object a non-specific indefinite. This suggests that (1a) is a scrambled structure licensed by the <±referential> feature, whereas the O-IO order in (1b) is the canonical order of Russian objects.

3. *Argument Prominence Hierarchy*

<±presupposed>	<±referential>	<±animate>

## **Semantic compositions in the meerkat alarm call system**

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**University of Zurich**

Human language differs from animal communication in its expressive power. This ability results, in part, from the fact that language is semantically compositional: meaningful units can be recombined into larger more complex strings. The rules guiding this composition have been more generally referred to as “lexical syntax” (Marler 1998) and whether animals also possess such grammatical skills has been intensely debated. Research addressing this question has focused primarily on primate communication, however, meerkats (*Suricata suricatta*) also possess a sophisticated vocal communication system. We investigated whether meerkats can combine calls together and what information receivers extracted from these combinations. Observational data and playback experiments indicate that in predatory contexts meerkats can combine meaningful call elements in a semantically compositional way, potentially to signal events of greater urgency. We argue this is the first evidence in non-human animals for lexical, or semantically compositional syntax, an ability previously thought to be unique to human language.

**Syntactic dependency resolution in Broca's aphasia**  
**Maria Varkanitsa, Dimitrios Kasselimis, Constantin Potagas, Judit Druks**  
**and Hans van de Koot**  
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Research on sentence comprehension in aphasia has shown that individuals with agrammatic Broca's aphasia often exhibit a highly selective deficit in processing intra-sentential dependencies; comprehension of sentences that contain filler-gap dependencies (i.e. A'-Movement) is impaired, whereas comprehension of sentences that contain Binding relations are relatively spared. This dissociation has been attributed to predictability (Santi & Grodzinsky, 2012), i.e. whether the dependencies can be identified at an early stage of processing based on syntactic factors. In A'-Movement, the processor encounters the filler early on and provides a warning that the reader/hearer should store the DP in memory and go hunting for a gap (predictable dependency). In Binding no such cues are available. The hypothesis that predictability is the key factor distinguishing A'-Movement from Binding makes the further prediction that relations mediated by leftward LF movement should behave like Binding. This prediction is supported by the finding that agrammatic patients perform normally on ambiguous doubly quantified sentences (Saddy, 1995; Varkanitsa et al., 2012), whose inverse scope reading involves (leftward) Quantifier Raising in the LF component (May, 1977).

This study investigates whether this asymmetry in predictability effects is also manifested in the processing of sentences with contrastive foci (CF) by Greek-speaking patients with Broca's aphasia. Greek provides an appropriate minimal pair, with the CF either moved or in situ. Four chronic Greek-speaking patients with aphasia (three agrammatic and one non-agrammatic) performed a picture-selection task, consisting of two experimental conditions (moved object-CF & in situ object-CF). Patients' performance revealed a dissociation between processing sentences with moved CF and sentences with in situ CF. Agrammatic patients performed significantly lower in the displacement condition than in the in situ condition. This dissociation disappears in the case of the non-agrammatic patient who performed relatively well on both conditions.

These findings provide further evidence that predictability is a key factor in Broca's aphasia. An in situ CF must undergo LF movement to the left periphery of the clause so as to take scope over its background. As was the case with Quantifier Raising, this covert leftward movement appears spared in Broca's aphasics.

Recent neuroimaging studies of non-brain-damaged individuals have shown that the presence of a syntactic dependency is not a sufficient condition for activating left Inferior Frontal Gyrus (IFG). Rather, a predictable displacement, as in movement-derived sentences, is required (Santi & Grodzinsky, 2007a, 2007b, 2012). This suggests that Broca's area hosts a 'syntactically constrained WM' (Santi & Grodzinsky, 2012: 830), that is the component of WM which is responsible for storage processes. In view of this finding, the conclusion that predictability is the key factor in determining patients' performance on the task reported here is further supported by the fact that all the agrammatic participants in this study had lesions that include left IFG, whereas in the non-agrammatic patient left IFG was intact.

A currently unresolved issue is how the impaired performance on reversible passives in Broca's aphasia should be accounted for. Neuroimaging studies report activation in Broca's area, however the fact that patients' performance varies widely may suggest that the manner of Broca's area involvement is different from A'-Movement (Santi & Grodzinsky, 2012).

## He can that: a TenseP anaphor in Scottish English

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All dialects of English allow the use of a verbal anaphor *that* in fronted position (1a), but some dialects of Scottish English (ScE) also allow *that* in post-auxiliary position (1b). The construction in (1b) is generally used to express assent to a previously expressed proposition, as in the examples in (1b); its properties have not to my knowledge previously been studied.

- (1) a. He can/won't/should/Ø make(s) good curry. — That he can/won't/should/does.  
b. He can/won't/should/Ø make(s) good curry. — He can/won't/should/does that!

The *that* anaphor in (1b) requires a linguistic antecedent rather than a pragmatic one, diagnosing it as a surface anaphor (containing internal structure), following Hankamer and Sag (1976). Furthermore, *that* allows A-extraction, as shown by passive and raising constructions (3), again indicative of internal structure. A'-extraction is however barred (4).

- (2) [Context: John appears to be about to cut off his own hand. Mary tells the audience:]  
\*He won't/shouldn't/might that.  
(3) a. John will be promoted. — He will that! b. John seems to be happy. — He does that!  
(4) a. John can play the piano really well. — \*The piano, he can that!  
b. John can't play the piano very well. — \*So what CAN he that?

Allowing A-extraction only is the same pattern as shown by the Danish verbal anaphor *det*, analysed by Houser et al. (2007) as *verb phrase pronominalisation* – post-syntactic spellout of a fully-fledged VP as a single word. I argue that ScE *that* can be analysed along similar lines, but targeting a higher constituent than VP. Specifically, I argue that *that* is an anaphor for Tense Phrase. I assume an articulated IP model, as in e.g. Cinque (1999), an abbreviated version of which is shown in (5). I assume negation/polarity is inserted freely in any position in this hierarchy, although not higher than Tense.

- (5) CP > Modal<sub>epistemic</sub> > Tense > Aspect > Modal<sub>root</sub> > vP

I assume that subjects and 'V-to-I' moved auxiliaries move to a position above Tense (but remain agnostic about this position's identity, labelling it here as FP).

- (6) [<sub>CP</sub> [<sub>FP</sub> John [<sub>F</sub> has ] [<sub>ModEpis</sub> [<sub>TP</sub> [<sub>Asp</sub> [<sub>ModRoot</sub> [<sub>vP</sub> t made curry ]]]]]]]

If *that* is a TP pronoun, then it should substitute for everything inside TP, and should resume the value of those elements in the antecedent. This makes the prediction that elements above Tense, such as speaker-oriented adverbs and epistemic modality, should not be subsumed by *that* and can be pronounced and have values different from the antecedent; while elements merged in or below Tense, such as tense, lower auxiliaries, manner adverbs, root modality and verbal arguments, cannot bear different values from those they bear in the antecedent, nor be pronounced unless they move to a position outside TP (e.g. subjects). This is borne out.

- (7) Elements within TP cannot be pronounced

- a. He's been making curry. — He has (\*been) that. *low auxiliaries*  
b. He will clean the kitchen. — He will (\*carefully) that (\*carefully). *manner adverb*  
c. There are three men outside. — There are (\*three men) that. *low subjects*  
d. John has given some money to Mary. — \*He has that to Bill, too. *objects*

- (8) Elements which move out of TP are pronounced, but cannot be changed from antecedent

- a. He has eaten to excess before. — #And he will that again. *tense*  
b. He should go and see the dean. — #He must that! *root modality*  
c. John will make curry. — #Mary will that, too. *high subjects*  
d. John will make curry. — #No, he won't that. *polarity*

- (9) Elements merged outside TP can be pronounced and changed freely

- a. It will rain heavily. — It might that, not sure though. *epistemic modality*  
b. John will make a right mess. — Frankly, he will that. *speaker-oriented adverb*

This also accounts for the intuition that this construction is most often used to agree with a previously expressed proposition. As a TP anaphor, it must contain almost all of the meaning of the antecedent; only elements such as epistemic modality and CP adverbs may change.

# Parametric change in copular predication and beyond in Welsh

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In early Middle Welsh (MW), we find the following word-order patterns in finite and nonfinite copular constructions. In nonfinite clauses, the predicate marker *yn* is compulsory, and the subject follows the predicate, as in (1). While the predicate marker *yn* is obligatory in nonfinite clauses, it is optional in finite ones. If *yn* is absent, subject follows predicate, as in (2); if *yn* is present, subject precedes predicate, as in (3). These patterns are often concealed by the fact that MW is a null-subject language and has inflected infinitives, allowing null subjects in both finite and nonfinite clause. The differences correspond to a formal alternation between *ys* in (2) and *mae* in (3) (cf. Irish *is* vs. *tá*, Doherty 1996, Lash 2011).

- (1) be.INF                    *yn*    predicate    subject
- (2) be.FIN                                    predicate    subject
- (3) be.FIN    subject    *yn*    predicate

I adopt an analysis of these patterns with two Pred heads listed in the lexicon, one associated with *yn* and one with its absence. When *yn* is absent, in (2), the copula *ys* is a Pred head and the  $v_{Pred}$  head that dominates it bears predicate-agreement phi-features that trigger movement of the predicate phrase to the outer specifier of  $vP_{Pred}$ , (4) becoming (5) as the derivation proceeds. *Ys* is marked [+FIN], hence this pattern is unavailable in nonfinite clauses.

- (4) [ $vP_{Pred}$  subject [ $v_{Pred}$  [PredP [[Pred *ys*] [XP predicate]]]]]
- (5) [[PredP [[Pred *ys*] [XP predicate]]] [ $v_{Pred}$  subject [ $v$  [PredP [[Pred *ys*] [XP predicate]]]]]

When *yn* is present, in (1) and (3), it is itself the Pred head. The derivation proceeds as before, yielding (6) after movement of the predicate phrase to the outer specifier of  $vP_{Pred}$ :

- (6) [[PredP [[Pred *yn*] [XP predicate]]] [ $v_{Pred}$  subject [ $v$  [PredP [[Pred *ys*] [XP predicate]]]]]

*Yn* differs from the copula in being unspecified for tense, hence the T-domain becomes relevant: in finite clauses, a tense-bearing ‘be’-verb is introduced into T, agreeing with the subject and triggering movement of the subject to its specifier. The ‘be’-verb in T itself raises to a head position high in the T-domain, as is general for Welsh, a VSO language, yielding (3). In nonfinite clauses, ‘be’ in T does not trigger subject raising, hence (1) results.

In later MW, a new word-order pattern comes to dominate in nonfinite clauses, namely be.INF – subject – *yn* – predicate, and the copula *ys* disappears from the language entirely. I attribute these changes to a single change, namely the loss of the movement-triggering feature on  $v_{Pred}$ . In nonfinite clauses, the derivation proceeds as far as (4), but, thereafter, there is no movement of PredP to the specifier of  $vP_{Pred}$ . Thus, whether T triggers subject-raising (in finite clauses) or not (in nonfinite clauses) is irrelevant: both options yield the same order.

Finally, I argue that loss of predicate raising is a far-reaching parametric change manifested in other areas of word order and clause alignment. Specifically, Welsh loses postposed subjects in unaccusative structures (7), and postposed pronominal objects in transitive structures, (8), in parallel with these changes. I argue that (7) is permitted only because an unaccusative subject is base-generated in SpecvP, and an unaccusative verb and its complement form a PredP. Movement of [PredP verb.UNACC PP] to an outer SpecvP yields this order; (8) is parallel. Once this movement disappears from the language, these orders disappear too. Furthermore, ergative alignment in nonfinite clauses is replaced by accusative alignment (Tallerman & Wallenberg 2012). The ergative system, illustrated in (9)–(10), was a sub-case of (7)–(8), with PP equivalent to an ergative agent and ‘subject’ equivalent to an absolutive element (a transitive object or intransitive subject). This system automatically collapses as PredP raising is eliminated. These far-reaching changes therefore justify viewing this as a major parametric change in the language.

- (7) verb.FIN.UNACC    PP    subject
- (8) verb.FIN.TRANS    PP    object.PRO
- (9) verb.INF.UNACC    [PP complement]    subject.ABS
- (10) verb.INF.TRANS    [PP subject.ERG]    object.ABS

**Microvariation in Old Italo-Romance: data from Old Sicilian and Old Sardinian**  
**Sam Wolfe**  
**University of Cambridge**

It is extensively reported that Old Romance featured a form of V2 syntax (Benincà 1983-4, Adams 1987, Roberts 1993, Vance 1997, Ledgeway 2012), with Old Italo-Romance varieties a point of particular theoretical and empirical interest in this regard (Vanelli 1986, Benincà 1995, Poletto 2006, Ledgeway 2007). Despite this observation, no detailed syntactic studies of either Old Sardinian or Old Sicilian exist in the literature. This paper presents and compares findings of a syntactic corpus study of Old Sardinian and Old Sicilian and considers the results' significance for a typology of microvariation across Old Italo-Romance.

Data from the corpus suggest that Old Sicilian presents a form of V2 system *contra* Cruschina (2011) who considers it to be SVO. This V2 grammar will be analysed, in the spirit of Haegeman (1996) and Holmberg (2012) as the result of the coincidence of V-to-C<sub>Fin</sub> movement and an [+EPP] feature on C<sub>Fin</sub>, which attracts an XP into its specifier. Striking evidence for the V2 nature of Old Sicilian comes from the preverbal left peripheral field, which hosts a non-subject constituent in 48.39% of matrix verb-second contexts. Additional evidence for a V2 analysis comes from the low statistical occurrence of V1 (13.33%) which appears to give a marked discourse interpretation; a matrix/embedded asymmetry that yields a strict SVO order in embedded contexts and the high statistical occurrence of a linear verb-second order (52.58%) (1):

- (1) *Zo fichi chillu previiti...* [Old Sicilian]  
That did that priest  
'The priest did that...'

A significant finding considering the claim by Benincà (2004:245) that Old Romance varieties are so syntactically similar as to constitute an 'abstract "Medieval Romance"', is that Old Sardinian is a V-initial language. V-initial orders are predominant in matrix clauses (71%) (2), with a limited matrix VSO/SVO alternative sensitive to the informational status of the grammatical subject. Crucially, V1 is the only attested order in embedded contexts, providing additional evidence for a V-initial analysis of Old Sardinian.

- (2) *Postince Bicturu Plana sa parçone sua dessa terra de Collectariu* [Old Sardinian]  
donated Bicturu Plana the portion his of-the land of Collectariu  
'Bicturu Plana donated his portion of the land at Collectariu'

It will be proposed, however, based on the placement of higher adverbs, generalised enclisis and the lack of Complementiser/Relativiser-XP-V orders in embedded contexts that Old Sardinian still features 'half of the V2 constraint', with V-initial orders such as (2) derived by V-to-C<sub>Fin</sub> movement. Old Sardinian however lacks an [+EPP] feature on C<sub>Fin</sub>. Such an analysis has two significant results. Firstly, it supports a hypothesis that Benincà's (2004) intuition is partially correct, with a consistent typological feature of Old Romance being V-to-C<sub>Fin</sub> movement. Secondly, it suggests that the point of microvariation between varieties is the consistency with which an additional XP is merged in the clausal left periphery as a result of an [+EPP] feature on C<sub>Fin</sub>.

It will be argued that these partially distinct syntactic systems arose from reanalysis of late Latin Primary Linguistic Data. Late Latin licensed V-to-C<sub>Fin</sub> movement and optional fronting of a Topic or Focus constituent in the clausal left periphery (Salvi 2004, Clackson & Horrocks 2007, Ledgeway 2012). Both Old Sardinian and Old Sicilian therefore retained movement of the verb to C<sub>Fin</sub>, whilst only in Old Sicilian (and other Old Romance V2 varieties) merger of a preverbal constituent was reanalysed as obligatory, leading to a grammar with an [+EPP] feature on C<sub>Fin</sub>. The two syntactic systems are therefore quite distinct at a surface level but at an underlying level share a common syntactic characteristic.

## Re-evaluating Wh-typology

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This paper argues that the wh-movement versus wh-in-situ distinction is not a particularly meaningful one in characterising the typology of wh-questions. Instead, wh-typology should be viewed as the variation between the interaction of a question particle (Q), the wh-phrase and interrogative C.

The claim that all languages employ the use of question particles is a non-trivial one, especially in light of Cheng's (1997) Clausal Typing Hypothesis (CTH), which states that languages syntactically mark questions either by wh-movement or question particles, but not both. However, the predictions that the CTH makes are too strong. Using the World Atlas of Language Structures Online (WALS) to cross-reference the features "Position of Polar Question Particles" (92A) and "Position of Interrogative Phrases in Content Questions" (93A), we see that these features are not mutually exclusive; all logical combinations of these features are possible. Out of the 682 languages that are catalogued for both of these features, 131 (19.2%) employ the use of both wh-movement and particles, and 181 (26.5%) employ wh-in-situ but no particle. This means that 312 (45.7%) languages documented by WALS directly contradict the CTH. Moreover, 427 (62.6%) of languages, regardless of wh-movement status, employ the use of particles.

Empirically then, there is a good case to include question particles into our consideration of wh-typology. Conceptually, particles are to be construed semantically as variables over choice functions, which take wh-phrases as their arguments to form a question particle phrase (QP). In turn, being a variable, it is bound through Agree with interrogative C. It is this mechanism, and not the presence of the particle itself, which "types" a clause as interrogative. Following this, EPP on interrogative C can trigger movement: traditional wh-movement is thus a result of QP piedpiping, while wh-in-situ is a result of moving only Q (or not at all). Optional wh-movement languages can be construed as allowing optional pied-piping of QP. Babine-Witsuwit'en (Denham 2000) is one such example. Variation within the QP itself, in combination with the various movement strategies mentioned above, yield a rich space of typological variation.

"Wh-in-situ" languages naturally do not allow QP pied-piping. Instead, they vary according to where particles end up being pronounced. Japanese (Hagstrom 1998) requires particles to follow wh-phrases but move them to a sentence final position:  $[[\dots wh t_i] \dots Q_i]$ . Sinhala (Kishimoto 2005), on the other hand, is similar to Japanese but requires particles to remain as close as possible to the wh-phrase and expresses the C-Q Agree relationship by verbal (which is in C) morphology:  $[\dots [wh Q]]$ . Tumbuka (Kimper 2006), on the other hand, keeps wh-phrases in-situ but requires particles to move to a sentence initial position:  $[Q_i [\dots wh t_i]]$ . Interestingly, no "mirrored" version of Sinhala appears to exist, i.e. particle precedes wh-phrases but is left in-situ:  $*[\dots [Q wh]]$ .

"Wh-movement" languages, on the other hand, allow for variation of QP piedpiping. Vata (Koopman 1984) adopts wh-movement but no pied-piping, i.e. a sentence final particle:  $[wh_i \dots [t_i Q]]$ , while Tlingit (Cable 2007) employs QP piedpiping:  $[[wh Q]_i \dots t_i]$ . Like above, there is similar gap in the paradigm here. There are no languages that allow pied-piping, but with particles preceding wh-phrases:  $*[[Q wh]_i \dots t_i]$ . This lack of what appears to be a head initial QP in the paradigm is accounted for by Q triggering movement of the wh-phrase to its specifier.

The system proposed above can potentially be extended to include cases of partial wh-movement, where Q moves, stranding wh-phrases in an intermediate position; or split DPs, where Q triggers raising of only the wh-determiner, but not the entire wh-phrase, to its [Spec,QP], which is then amenable to further raising, stranding the NP behind. The paper concludes by presenting a preliminary sketch of what the possible parameters of variation might be, in pursuing the above research programme.

## Word order, intonation andthetic sentences in Russian

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Modern Russian is a SVO language with free word order (scrambling of arguments). VS-word orders are attested both inthetic and categorical sentences and possible with transitives and intransitives. VS, VSO and VOS-orders can be linked with different kinds of information structure, so that each word order allows two or more different communicative readings (Kovtunova 1976). Russian is also a language with direct accent marking of communicative constituents (theme, rheme, focus of contrast etc.).

There are two subtypes of Russianthetic sentences – context-independent ones like *Vesna prišla* (SV)~ *Prišla vesna* (VS) ‘The spring came’ and context-dependent ones called ‘sentences with an inherent theme’ in the Russian linguistic tradition, e.g. <*Tixo!*> *Babuška spit* ‘<Quiet!> Grandma is asleep’ (Baranov and Kobozeva 1983). Both subtypes can be realized both with SV and VS-orders. Both subtypes lack an accented theme marked with the Intonation Construction 3 (IC-3) (Yanko 2001), a steep rise with a fall on post-tonics (LH\*L-L%) which marks the theme.

King (1995) claims that Russian is a VSO language: SpecVP is the subject position, and the tensed verb raises to I where it case marks the subject in SpecVP. This entails that Russian categorical SVO sentences are derived by topicalization fromthetic Russian VSO sentences. Bailyn (2004) argues against King’s analysis. He claims that Russian is a SVO language without verb raising but with A-scrambling of objects. Both King and Bailyn interpret Russian VSO sentences like (1a) asthetic. Paduceva (1985) and Yanko (2001) give up the postulate of base word order in Russian and analyze pairs of sentences which have the same numeration but different communicative structure in terms of linear-accent transformations: rules changing both linear order and/or accent markings. In their analysis,thetic variants of a numeration can be derived from categorical and vice versa.

I argue that all Russianthetic sentences irrespective of their surface order (SV, VS, VSO, SVO) are derived from categorical sentences by deaccenting their theme. I furthermore argue that deaccenting of a theme results from Left Focus Movement i.e. an operation moving a postverbal complement X which bears the focus accent (schematically  $\mathbf{tX}$ ) to the left for its governing verbal category. The moved element gets a reinforced focus accent (schematically  $\mathbf{ttX}$ ):  $[_{VP} V^{\circ} \mathbf{tX}] \Rightarrow \mathbf{ttX}_i \dots V^{\circ} t_i$ . Russian does not allow post-focal accented themes (Zimmerling 2008). Therefore, if a focal element moves outside VP and crosses the position of an accented thematic subject marked with IC-3 (schematically  $\mathbf{tX}$ ), the subject gets deaccented (schematically  $\mathbf{t}_0X$ ):  $[_{NP} \mathbf{tX}] [_{VP} V^{\circ} \mathbf{tX}] \Rightarrow \mathbf{ttX}_i [_0S] \dots V^{\circ} t_i$ . This explains the fact that Russianthetic sentences can be realized both with SV and VS orders since  $\mathbf{ttS}_0V$  structures like *Babuška spit* ‘Grandma is asleep’ are just inverted variants of  $_0V\mathbf{tS}$  structures. Finally, I will demonstrate that neither King’s nor Bailyn’s analysis of VS-sentences are tenable since VS-orders apart from markingtheticity can also mark three types of categorical sentences in Russian. The inverted verb can be a) the theme ( $\mathbf{tV}$ ) b) the rheme ( $\mathbf{tV}$ ) c) part of the dislocated rheme – see example (1a), schematically marked as ( $\mathbf{tV}$ ). In all these cases the verb gets different accent markings.

- (1a)  $[_F \mathbf{tV} \text{Posadil}_i \dots [_T \mathbf{t}_0\text{ded}] t_i \text{ repku}] \Leftarrow (1b) [_T \mathbf{tV} [_{NP} \text{Ded}]] [_F [_{VP} \text{posadil } \mathbf{t} \text{repku}]]$   
planted gramps-NOM turnip-ACC gramps-NOM planted turnip-ACC  
‘Gramps planted a turnip.’ ‘Gramps planted a turnip.’

Categorical, V-S-O, dislocated VP, deaccented thematic subject. T and F stand for ‘Theme’ and ‘Rheme’.

## **Meaningful strings of calls in primates**

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I review some of the existing evidence for call sequences in non-human primates, including experimental studies showing how recipients infer meaning from combinatorial utterances. However, despite much recent progress the gap between primate 'grammar' and human speech continues to remain exceedingly large, with no obvious intermediate states. I conclude that the transition to human grammar may have emerged as a byproduct of enhanced vocal control, something that appears to have evolved only in the human lineage.



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