Linguistics Association of Great Britain
Annual Meeting 2017
University of Kent

Monday 4th-Thursday 7th September 2017

ABSTRACT BOOKLET

August 2017

Alternations in perception verbs: what they tell us about the ingredients of agency

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With the ultimate goal of shedding some new light onto the interface between syntax and the semantics of argument and event structure, and adopting a generative approach, this paper focuses on how certain C(ognitive) P(erception) V(erb)s like *feel* are obligatorily agentive (and eventive) when merging with a directional PP/particle (*feel into the crevice*) (**1**). Furnishing some syntactic head Voice with different flavours depending on the interpretation of the verb will not capture the fact that it is the embedment of the PP that induces agency (**2**). The background ideas are 1) that agency requires eventivity and a mental state, and 2) that the interpretation of v and, indirectly, of Voice, depends on the structure that v embeds (Hale & Keyser 2002; Author 2016; Wood & Marantz 2017). v is interpreted as eventive by virtue of its embedding a directional expression; as regards the mental state component, it is a property of the perception root (FEEL), merged as adjunct to v (Embick 2004, Author 2016) (**3**).

1. It is well known (Rogers 1971, Dowty 1979, Rothmayr 2009) that CPVs like *see* or *hear* differ from their corresponding A(ctive) P(erception) V(erb)s *look* and *listen*: the former do not obligatorily involve an agentive E(xternal) A(rgument). For instance, the German APV *betrachten* 'look at' is incompatible with the agentive adverb *unabsichtlich* 'undeliberately', unlike its CPV counterparts *sehen* 'see'; the same can be said of the English renditions:

(1) Die Irmi sieht / #betrachtet unabsichtlich das Bild.
the Irmi sees / looks undeliberately the picture
'Irmi undeliberately {sees/#looks at} the picture.'

This thematic difference goes hand in hand with an event-structure difference, to wit, that CPVs usually behave as states (*Kimian states*, Maienborn 2007), while APVs have an activity —a Davidsonian state— interpretation. Thus, Rothmayr (2009) shows how only APVs like *betrachten*, qua event-denoting verbs, admit a time-span reading of the adverb *ein bisschen* "a bit" 'for a little while'. CPVs like *sehen* on the other hand, do not license that reading; in the following example, *ein bisschen* may denote, with *sehen*, that the perception of the picture was not complete, e.g., only a corner was to be seen:

(2) Die Irmi betrachtet / sieht das Bild ein bisschen. (Rothmayr 2009:104)
the Irmi looks / sees the picture a bit

What seems to have gone largely unnoticed in the literature is that certain CPVs systematically behave as APVs when they are combined with a directional PP or particle. The verb *feel*, for instance, behaves as either agentive or not in its more frequent transitive use (Dowty 1979), but becomes obligatorily agentive when heading a predicate involving a directional PP:

(3) a. While in the cave, Ann (deliberately/undeliberately) felt a crevice in the rock.
b. While in the cave, Ann (deliberately/#undeliberately) felt into a crevice in the rock.

As regards Aktionsart, *feel into* can be diagnosed as non-stative. Thus, taking into account that only stative predicates may occur in the simple present with no habitual or frequentative reading (Dowty 1979, Katz 1995, Jackson 2005), *Ann feels into the crevice* requires such a habitual or frequentative interpretation, while *Ann feels the crevice* does not. On the other hand, particles like *around* seem to possess the same eventivizing and agentivizing effect:

(4) Feel around in there, Larry, and see if you can find anything. (Google Books)

Similar effects, and with even a larger set of CPVs are found in German:

(5) a. Ursula (absichtlich/unabsichtlich) roch das Herringsfasss.
Ursula deliberately/undeliberately smelled the herring-barrel
b. Ursula (absichtlich/#unabsichtlich) roch ins Herringsfasss (hin-ein).
Ursula deliberately/undeliberately smelled in.the.ACC herring-barrel LOC-in
'Ursula deliberately/#undeliberately smelled into the herring barrel.'

Other languages in which a similar phenomenon has been reported include Latin. Thus, the addition of the preverb *in-* 'in' to the stative *video* 'see' yields agentive *in-video* "look maliciously or spitefully at"(Romagno 2003). All in all, we are not dealing with quirks of particular lexical items of particular lexicons.

2. Dowty (1979:114) proposes that the difference between CPVs and APVs (including the agentive use of verbs like *feel*) lies in the absence vs presence of an abstract agentive predicate DO: APVs correspond to a structure in which a basic predicate is the complement of DO (following Ross's 1972 analysis of verbs of action), where CPVs have a simple DO-less structure. An updated version of this analysis is proposed by Rothmayr (2009) —I use example (1):

(6) a. CPV: [$_{VP}$ [$_{DP}$ Die Irmi] [$_{V}$ [$_{DP}$ das Bild] sieht]]
b. APV: [$_{vP}$ [$_{DP}$ Die Irmi] [$_{v}$ *v* (DO) [$_{VP}$ [$_{DP}$ Die Irmi] [$_{V}$ [$_{DP}$ das Bild] betrachtet]]]]

This analysis, or any other one in which agentivity is encoded explicitly in some high functional element like Voice, misses the fact that APVs and the APV-like use of CPVs reported here (see (3)) are overtly distinguished from CPVs not by material merged high in the tree, but by some adpositional material embedded in the predicate: cf., for instance the prefix *be-* in *betrachten* (1) and the PPs in (3-b) and (5-b).

3. In my approach, Voice has an inherent originator semantics, with both events and states. EAs are, thus, always originators. The difference between Agents and Experiencers depends on the type of structure embedded in the vP (see also Wood & Marantz 2017). If v is merged with a configuration encoding pure location/state, then it is interpreted as stative (a Kimian state), and the EA is interpreted as an Experiencer. If v is merged with a configuration involving creation or change (of location/state), then it is interpreted as eventive, and the EA cannot be interpreted as an Experiencer. For transitive non-agentive CPVs (3-a) I adapt Hale & Keyser's (2002) analysis of stative psych verbs. v takes a *locative* PP structure headed by an abstract preposition of central coincidence taking the verbal root as complement (7-a). The locative structure induces a stative reading in v and the EA has to be interpreted as a static originator. A paraphrase would then be something like "Ann has the crevice in her feeling". For cases like (3-b), v takes a directional PP (PathP) as complement, while the root is merged as an adjunct to v (Embick 2004, Author 2010) —see (7-b). v is interpreted as eventive, due to its being combined with a structure encoding change, and the EA is a dynamic originator:

(7) a. [$_{VoiceP}$ *Ann* [$_{Voice'}$ Voice [$_{vP}$ v [$_{PP}$ [$_{DP}$ *the crevice*] [$_{P'}$ P FEEL]]]]]
b. [$_{VoiceP}$ *Ann* [$_{Voice'}$ Voice [$_{vP}$ [$_{v}$ v FEEL] [$_{PP}$ [$_{PathP}$ Path (= *to*) [$_{P'}$ P (= *in*) [$_{DP}$ *the crevice*]]]]]]

What Agents and Experiencers have in common is a mental state (Reinhart 2000/2016). I take this component not to be a structural property, but a one encoded in the root; this is intuitive enough: roots like FEEL or SEE seem to undefeasibly encode a mental state.

Selected references: DOWTY, D. R. 1979. *Word meaning and Montague grammar*. Springer. HALE, K. & S. J. KEYSER. 2002. *Prolegomenon to a Theory of Argument Structure*. MIT. ROTHMAYR, A. 2009. The Structure of Stative Verbs. *John Benjamins*.

Using Constructed Languages to introduce linguistic concepts to Year 10 students

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In the spring of 2017, QMUL ran a one week outreach summer school for year 10 students (15 year olds) as part of its widening participation programme, and as an attempt at bringing concepts of linguistics to school children. The School was very successful in achieving its aims and we plan to expand it in future years. In this talk, we sketch out how we ran the summer school, provide examples of our materials, and reflection on what worked and what we would change next year.

The development of the English recipient passive considered in the light of psycholinguistic research

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This paper will show that evidence from psycholinguistic research can be used to back up or to question hypotheses about grammatical change in general. In particular, our case study will also show that psycholinguistic research with bilingual subjects might help us to prefer (or disprefer) contact-induced over language-internal paths of explanation.

In the first part, we will present recent findings from historical linguistics (HL) on the rise of the recipient passive (RP, see C. Allen 1995) in English. They show that the first occurrences of the type She was given the book in late Middle English were closely related to verbs borrowed from French, and appeared with native verbs only later. From a historical and contact-linguistic point of view, these data are difficult to explain, since French never had a recipient passive. Possible explanations involve either the copying of an abstract case feature (assuming that the French dative was an instance of abstract case, and different from the English inherent dative) or an intermediate 'bridge' construction in the form of ditransitive verbs taking clausal Theme complements and showing variation for the Goal complement (like Old French comander 'command', which sometimes takes an accusative instead of a dative Goal).

In the second part, we will present several types of findings extracted from the psycholinguistic (PL) literature and show how they can be related to the RP data we presented in the first part:

- Rowland et al. (2012): Priming experiments show stronger effects with passive sentences. For HL, this means double-object structures and RP should be considered separately. More generally, PL studies can hint at specific source language structures as being more relevant for contact influence. Furthermore the authors suppose that lexical boost effects (stronger priming with specific lexemes) could have been stronger with pronominal dative complements. Since our RP constructions also appear first with specific (i.e., French) verbs, and since French dative complements are often pronominal, HL should pay special attention to possible influence of pronominal French constructions.
- Ambridge et al. (2014) present well-formedness judgments of dative constructions by children and adults. They found that adults, unlike children, seem to have a notion of non-native ('Latinate') verbs. For an explanation in HL terms the problem is that not all French verbs are morphophonologically marked (monosyllabics like pay are not). So the authors using RP with French verbs may have had a meta-knowledge (about the verbs being French). Their use of a new structure may have been conscious or the effect of an imperfectly acquired L2.
- Fernández et al. (2016) confirm the findings of Ambridge et al. (2014) concerning language dominance: it can't explain the observed cross-linguistic effects, whereas most historical or sociolinguists would be tempted to attach a greater importance to dominance. Furthermore, they found that cross-linguistic influence can produce a higher tolerance for constructions not licensed in one of the languages of a bilingual.Applied to the case of RP, these findings can help understand how even the 'weaker' language (French) can have influenced the 'stronger' language (English).

In the third part we will widen our perspective beyond the RP phenomenon and pose the question of mutual benefit between PL and HL in a more general way, with a focus on the connections between cross-linguistic priming and language contact situations. Current PL work investigates if and on which level the two languages of bilinguals share structural representations. This helps HL to assess the potential for the syntactic structures of the two languages to influence each other. Conversely historical contact linguistic studies may identify the structures which PL might test (so far, the list structures of structures tested in cross-linguistic priming experiments is still limited). We can only briefly hint at some relevant work here:

- Hartsuiker et al. (2004) strongly argue in favour of the shared-syntax account, and confirm the assumption of combinatorial nodes that can well account for how verb class-specific passive structures can develop in one language, triggered by the other language.
- The complexity of cross-linguistic influence is especially well highlighted by Jacob et al. (2017) who found that not only the linear order (here: of the complements of ditransitive verbs), but also the depth of their syntactic embedding is a prerequisite for priming effects.
- Hsin et al. (2013) go even further, showing that children are sensitive to 'structural interference priming' that targets ungrammatical structures in the other language. For HL, this could provide an intriguing explanation of how a new grammatical structure can develop in contact situations.

In the conclusion we will address how this kind of interdisciplinary work can be of mutual benefit for both fields, psycholinguistics and historical linguistics.

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The spread of inflected forms in Apulian aspectual periphrases: syncretism and change

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This presentation is concerned with the spread of inflected forms in progressive and andative periphrases of Apulian dialects (southeastern Italy). In Ibero- and Italo-Romance, these periphrases are usually expressed via the reflexes of Latin STAND and GO respectively (henceforth V_1) which combine with a non-finite lexical verb (henceforth V_2). The V_2 of the progressive periphrasis is either a gerund or a 'prepositional' infinitive, where the former historically grammaticalised later (e.g. 16th-century Neapolitan; Ledgeway 2009) than the latter, which has been the default expression of the imperfective for centuries. The V_2 of the andative can be expressed by the prepositional infinitive, or by means of parataxis, i.e. coordination of finite forms of V_1 and V_2. Likewise, southern Italo-Romance varieties, e.g. Sicilian, have been claimed to historically form the andative paratactically by exploiting the reflex of Latin conjunction AC 'and' (Rohlfs 1969), e.g. *vaju a ttravagghiu* 'I go and work'. Likewise, Rohlfs (1969) argues that this same paratactic construction is found in the progressive of Salento, i.e. *sta ffazzu* 'I stand and do = I'm doing'. However, when we consider the Apulian situation, we actually find all the abovementioned paradigms, split between the north (except in Gargano varieties), where only non-finite V_2 is found, and the (centre-)south, where we can clearly observe how inflected V_2 forms start to appear below the 'Poggiorsini-Bari' isogloss, and spread to certain cells of the periphrastic paradigms replacing the non-finite form (which in this area is can only be formed by STAND/GO+(a)+$V_{2[-\text{FINITE}]}$). This situation has gone totally unnoticed in the literature except for Salentino, due to its alleged contact with the Greek-speaking enclave. In contrast, the neighbouring Apulo-Barese varieties offer a clear picture of the spread of the inflected forms in these periphrastic contexts, which leads us to reconsider Rohlfs' claim. In the northern-most part of the 'inflected-V_2' isogloss, the minimal amount of inflected forms is two, i.e. [2sg]-[3sg] of the present indicative of the two periphrases, e.g. Gravina. Inflected forms further spread to other persons ([1sg] in Rutigliano > [3pl] in Polignano), tenses (Alberobello) and moods the further South-East one goes, following specific 'morphomic' patterns (Maiden 2011). The extreme generalisation of inflected forms to all possible contexts is found in southern Apulo-Barese and Salento, where the auxiliary becomes an invariable aspectual morpheme.

	Gravina: 'play'	**Rutigliano: 'play'**	**Polignano: 'go out'**	**Alberobello: 'go out'**	**Alberobello: 'go out' (past)**
1sg	stóucʾa ssuné	stɔŋg a ʃˈʃɔ:uk	stóuchə jèssə	stò jèssə	stɛ ccaˈmɛvə
2sg	sté ssùnə	ste ʃˈʃu:k	stè jìssə	stè jéssə	stɛ ccaˈməvə
3sg	sté ssóunə	ste ʃˈʃɔ:uk	stè jèssə	stè jèssə	stɛ ccaˈmɛvə
1pl	stəmʾa ssuné	stəm a ʃəˈkwe	stémə alʾassù	stè asséimə	stɛ ccaˈmammə
2pl	stətʾa ssuné	stətə a ʃəˈkwe	stétə alʾassù	stè asséitə	stɛ ccaˈmavəvə
3pl	stònnʾa ssuné	stɔnn a ʃəˈkwe	stóunə jèssənə	stàunə jèssənə	stɛ ccaˈmavənə

This spread of finite forms in different grammatical persons – which only if complete can spread to [+past] and [+irrealis] contexts – forms an implicational hierarchy which can be mapped onto a neat geographic continuum across Apulo-Barese varieties:

basic pattern > (*L-pattern* > *U-pattern* >) N-pattern > all
[2sg]-[3sg] > [1sg] > [3pl] > [1pl]-[2pl]-[past]-[irrealis]

As for the origin of these inflected forms in the different cells of the periphrastic paradigms, we pursue an alternative scenario to Rohlfs' 'AC-hypothesis' (which, however, we do not entirely discard for Salentino), and we consider the 'STAND/GO+AD+infinitive' as the original hypotactic structure available in this area. We argue that morphophonological ambiguity between certain aphaeretic infinitives, i.e. *móvə*(-rə) 'to move', and [3sg], *móvə* '(s)he moves', triggered the reinterpretation of the former as inflected forms within the paradigm of the present periphrases, which then gradually spreads southeast-wards. This identity was also historically caused by two other crucial phonetic and morphological changes in the Apulo-Barese paradigm: the root-augment -SC-, i.e. FINIRE>**fərnì(rə)>fərnèscə* 'to finish/(s)he finishes', and the common shift from arrhizotonic to rhizotonic, 'new' infinitives, i.e. *dərmì(rə)>dòrmə* 'to sleep/(s)he sleeps'. Hence, a process of analogical assimilation occurred between the infinitive of -*i*-verbs (cf. above) and those belonging to the rhizotonic -*e*- conjugation (e.g. *móvə*), in which the truncated infinitive and the [3sg] were naturally syncretic and, therefore, ambiguous. Under these conditions, the ambiguous rhizotonic infinitives found in STAND/GO periphrases could readily be reinterpreted as the [3sg] of -*e*-conjugation verbs. By further analogy, these ambiguous 'new' infinitive/[3sg] forms indirectly influenced the other conjugations to behave similarly within periphrastic contexts (e.g. st'a **mmangià**(-rə) > st'a **mmàngə** '(s)he's eating'):

Subordination (STAND-to-$V_{[INF]}$)	**New infinitive (STAND-to-$V_{[INF]}$)**	**STAND-to-$V_{[3SG]}$**	**1sg (STAND-to-V)**
st'a **mmèttə**(-rə)		st'a **mmèttə**	stògg'a **mmèttə**
*st'a **ddərmì**(-rə)	st'a **ddòrmə** >	st'a **ddòrmə** >	stògg'a **ddòrmə**
*st'a **ffərnì**(-rə)	st'a **ffərnèscə** >	st'a **ffərnèscə** >	stògg'a **ffərnèscə**
st'a **mmangià**(-rə)	st'a **mmàngə** >	st'a **mmàngə** >	stògg'a **ʔmmàngə**
st'a **javətà**(-rə)	st'a **jàvət(ésc)ə** >	st'a **jàvət(ésc)ə** >	stògg'a ***jàvət(ésc)ə**

Hence, we depart from Lopez's (1952:II.51) statement whereby the of the (Apulo-)Barese infinitive 'bears no consequences' (cf. also the loss of infinitival -*en* in English; Roberts 1993:261; Roberts&Roussou 2003:ch.2). In fact, we argue that this erosion brought about the initial conditions that would eventually lead to the gradual and fragmentary substitution of some (high-frequent) arrhizotonic infinitives of -*i*-verbs. An important consideration is that there is no Italo-Romance variety presenting only the [3sg] inflected-V_2. Hence, we assume that, as the ambiguous new infinitive was becoming reinterpreted as [3sg], this mechanism was simultaneously becoming operative in the [2sg] of the STAND/GO periphrases, possibly favoured by the same rhizotony in the imperative- V_2 (cf. Neapolitan: Ledgeway 1997 *et seq.*). Crucially, these changes must have been helped by the identity of forms of [2sg]-[3sg] STAND/GO, i.e. *sta/va*, and the relative absorption of the *a* (yet retaining the gemination of the consonant of V_2). This is a clear instance in which morphology acts as a trigger for the systematisation of a syntactic rule for inflected V_2s where non-finite forms are expected. Syntactically, these periphrases are treated as monoclausal entities in the sense of Cinque (2006), where the auxiliary is a functional head in the spine of the extended projection of the VP. We thus argue that there is still a single agreement head available in such aspectual expressions, which allow the V_2 to show overt agreement whenever the auxiliary no longer presents the morphological ability to do that. We follow Keenan (2002; see also Longobardi 2001; Roberts 2017:ch.20) in claiming that syntax tends to remain 'inert' if there are no morphophonological triggers to drive changes.

Placeholder expressions: Pragmatic enrichment and linguistic underdeterminacy

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Even though they are widely used across languages in everyday informal conversation, placeholder expressions (also known as 'lexical fillers' or 'vacuous expressions'), such as "*thingy*", "*what-d'you-call-it*", as well as certain uses of "*stuff*" or "*do*", etc., have been generally understudied. The few papers dedicated exclusively to them, seem to adopt a predominantly typological perspective and deal only marginally with the description of their semantic and pragmatic properties (for an exception, see Enfield 2003).

In linguistics, placeholder expressions are usually discussed under the general rubrics of vagueness or deixis. A careful assessment, however, reveals that neither of these classifications can do full justice to the intricate ways in which the relevant expressions can be used. On the one hand, while the use of "*thingy*" in (1) is strictly speaking deictic, the use of "*you-know-what*" in (2) cannot be classified as such, at least in the sense that determining the expression's referent does not directly depend on who is speaking to whom, the time and place of the utterance or the immediate physical environment:

(1) *Can you bring me the thingy over there?*
(when one points to a tool in the shed)

(2) *Did you manage to get the you-know-what?*
(when an unmarried person talks to his/her partner in the presence of a strict/conservative family member and uses "*you-know-what*" to refer to a box of condoms)

On the other hand, classifying placeholder expressions under vague language may be reasonable in cases such as (3), where the speaker may be taken to remain non-committal about some particular referent, but seems to also not apply in instances where the relevant expressions are used with a very specific referent in mind, as in (4) and (5):

(3) *We kissed and then we did stuff.*
(speaker refers to sexual intercourse, but not willing to give further information)

(4) *I forgot to bring the what-d'you-call-it.*
(speaker is unable to retrieve the right word)

(5) *I can't get on an airplane, you know, because of that thing.*
(Speaker refers to fear of flying, but is embarrassed to utter it)

What I wish to propose in my talk is that the optimal way of describing them is by classifying them as a special kind of referential indexicals (Hanks 2005) that transcend and override the traditional categories of (person, time, etc.) deixis. In this respect, their reference resolution is typically arrived at through the pragmatic operation of saturation, since their contextual enrichment is obviously linguistically-mandated. If this approach is correct, it can be seen to carry important implications for the on-going debate between minimalists and

contextualists. For one, being genuinely semantically underspecified, placeholder expressions would need to be incorporated in Cappelen & Lepore's 'Basic Set of Context Sensitive Expressions' (2005), inevitably extending it over and above Kaplan's original list of true demonstratives, since placeholder expressions cannot, arguably, be straightforwardly accounted for using the original Kaplanian analysis (Kaplan 1989a, 1989b). Then, placeholder expressions can be added to the list of phenomena that directly support the linguistic underdeterminacy thesis (Carston 2002), not only at the propositional but also, and more crucially, at the lexical level, as they often call for reference resolution on the basis of encyclopaedic knowledge.

All in all, the widespread use of placeholder expressions across languages seems to be derivative of our ability to effortlessly infer the intentions of others given sufficient contextual input. It is this (communicative) ability that permits us to not only use these expressions with varying degrees of precision, but also to even override the need for some fully determinate propositional content to be attributed to the utterances containing them. And, since as (6) below shows, this is an ability that we can use so creatively without any particular effort from a very young age, they appear to reveal an exciting new route for research in the field of lexical meaning.

(6) "*I feel like smurfing some bread*"
(taken to mean 'I feel like eating/baking/stealing some bread, depending on the particular smurf that utters it)

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How Georgian is (not) like Basque: a comparative case study of split-S languages

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Introduction. In split-S systems the arguments of different intransitive predicates occur with different case and/or agreement marking ((1), (2)). The conditioning factors of such a split are cross-linguistically rather variable, with different factors such as volition, stativity, telicity and focus each playing a role in different languages (see Mithun 1991 a.o.). This study however focuses on two languages with superficially rather similar split-S case systems, Basque and Georgian:

(1) Basque:

a. *Gizon-a etorri da.*
man-the(-ABS) came is
"The man came."

b. *Gizon-a-**k** ikasi du.*
man-the-ERG studied has
"The man studied."

(2) Georgian:

a. *Rezo gamoizarda.*
Rezo(-ABS) he.grew.up
"Rezo grew up."

b. *Nino-**m** daamtknara.*
Nino-ERG she.yawned.
"Nino yawned." (Harris 1981)

Data. *(1) Basque.* The analysis proceeds largely from the classes of intransitive verbs identified by Sorace (2000). Change of location and change of state verbs (e.g. *erori* "fall", *hazi* "grow") in Basque almost always occur with absolutive marking. Verbs denoting states and uncontrolled processes are more variable: some occur with absolutive marking (e.g. *geratu* "remain", *irristatu* "skid"), others preferentially with ergative marking (e.g. *iraun* "last", *dardaratu* "tremble"). Although verbs of sound/light emission are always ergative-marking (e.g. *dirdiratu* "shine"), this variation does not otherwise appear to be generally predictable from a semantic point of view; i.e. it is lexically idiosyncratic within the state/uncontrolled process classes. Motional controlled process verbs are similarly variable, e.g. ergative is preferred with *bidaiatu* "travel", absolutive with *jauzi* "jump". Non-motional controlled processes, on the other hand, generally govern ergative, e.g. *bazkaldu* "have lunch", *trabailatu* "work" – though a systematic set of exceptions to this is found with reflexive verb like *dutxatu* "shower"; these verbs, which are strongly associated with the absolutive, probably involve covert reflexive marking. Such marking may also account for the behaviour of verbs like *jolastu* "play" and *borrokatu* "fight" which are sometimes attested with absolutive marking: these verbs often have a reciprocal function which is grammaticalised with reflexive-type behaviour.

(2) Comparison with Georgian. Georgian has split-S alignment with verbs in one particular T/A/M series, which is the focus here. Georgian change of state (e.g. *kvdeba* "die") and non-motional controlled process verbs (e.g. *mushaobs* "work", *tamashobs* "play") pattern with Basque in occurring with absolutive and ergative marking respectively. Likewise, the state, uncontrolled process and motional controlled processes classes pattern broadly with Basque: some verbs in these categories take absolutive (e.g. *darchena* "stay, remain") and some ergative subjects (e.g. *arleboba* "exist") – though compared with Basque there is more of a tendency toward a preference for the ergative. Sound emission verbs generally occur with ergative, as in Basque, but light emission verbs are more variable (e.g. *brts'q'inavs* "shine"

takes absolutive subjects but *kashkashebs* "shine brightly" takes ergative ones): evidence again for lexical idiosyncrasy, here further apparent on a cross-linguistic scale. More substantial differences arise amongst change of location verbs: while many of these (e.g. *ts'ava* "go (away, off)", *vardeba* "fall") take absolutive, as in Basque, some occur with ergative – thus the change of location and motional process classes are not clearly distinguished here. Reflexive predicates in Georgian are generally formed with reflexive pronouns and behave as transitives (thus they take ergative subjects).

	Basque	**Georgian**
Change of location	*Absolutive*	*Absolutive or ergative*
Change of state	*Absolutive*	*Absolutive*
State	*Absolutive or ergative*	*Absolutive or ergative*
Uncontrolled process	*Absolutive or ergative*	*Absolutive or ergative*
Controlled process: motional	*Absolutive or ergative*	*Absolutive or ergative*
Controlled process: non-motional	*Ergative*	*Ergative*
[Reflexive/reciprocal process	*Absolutive*	*Ergative*]

Table 1. Summary of case patterns in Basque and Georgian.

Formal analysis. The similarities between Basque and Georgian are striking given that these languages are unrelated and geographically distant, suggesting we ought to look for an analysis rooted in universal properties of human language. However, there are also differences to be accounted for. I claim that the mapping of arguments to absolutive vs. ergative (internal vs. external argument) positions is constrained by a (universal) hierarchy of formal features associated with predicates (cf. Sorace 2000):

(3) [+change] > [+state] > [+process, –control] > [+process, +control]

If absolutive can be associated with a feature or feature bundle F on this hierarchy, it also must be available for all features to the left of F; if ergative can be associated with F it must also be available for all features to F's right. This same hierarchy also constrains auxiliary selection and other unaccusativity-related behaviours, which cross-linguistically show a higher degree of variation than is observed between Basque and Georgian but nevertheless appear to be limited in the ways in which this variation may manifest (Sorace 2000 a.o.).

Further subtleties in the differences between languages may arise in various ways. In particular, some sorts of verb may grammaticalise different features in different languages. This is constrained by the verb's proximity to the prototypical semantic associations of the formal feature. Thus, while verbs which semantically denote *changes of state* are always [+change], verbs of *motion / change of location* – which are less prototypical changes – are sometimes grammaticalised as [+change] and sometimes not; the probability of this is further constrained by semantics, e.g. directed motion verbs tend most strongly to be [+change]. Reflexive verbs may pattern with either ergative or absolutive marking (cf. auxiliary selection with reflexives in French vs. German).

We thus have a constrained theory of linguistic variation which accounts for similarities between Basque, Georgian and other languages whilst also permitting the observed differences, including small differences on the level of individual lexical items. Under this model, the degree of variation permitted may be quite considerable, but very many systems are nevertheless ruled out: this in line with what is observed in actual languages.

Attributives are not relatives: A single source analysis for attributive adjectives

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Attributive adjectives are well known for exhibiting ordering restrictions. For example, in neutral contexts (1a) is preferred to (1b).

(1) a. a big black bag b. ?a black big bag

These restrictions are not found predicatively, as in full (2) or reduced (3) relative clauses:

(2) a. a bag that is big(,) that is black b. a bag that is black(,) that is big

(3) a. ?a bag bigger than a breadbox(,) blacker than a taxi[1]
b. ?a bag blacker than a taxi(,) bigger than a breadbox

However, a number of attributive adjectives are not subject to ordering restrictions. For these adjectives, their scope is determined by where they appear in the phrase:

(4) a. a former famous actress ≠ b. a famous former actress (Teodorescu, 2006)
former > famous (actress) *famous > former (actress)*

(5) a frozen chopped chicken ≠ b. chopped frozen chicken (Svenonius, 1994)
frozen > chopped (chicken) *chopped > former (chicken)*

Additionally, where adjectives that are subject to order restrictions appear in non-canonical order, they also exhibit a type of scope effect. (1b) is only licit where the speaker is picking out the black one out of a group of big bags (*black > big (bag)*).

Cinque (2010), following Larson (2000), accounts for these facts by arguing that adjectives can have two sources: a reduced relative clause source (for adjectives that can appear predicatively), and a direct modification source (for those that cannot). The former are derived from (reduced) relative clauses and are situated higher in the noun's functional projection than the latter. If certain adjectives can have both a relative and a direct source, then the scope effects and lack of ordering effects above follow.

This talk will argue that the behaviour of attributive adjectives is not adequately captured by such an account, which requires two different sources of attributives. Instead, I propose that attributives all have the same source, and are not derived from full or reduced relative clauses. The primary characteristic of this source is asymmetric scope, whereas predicative uses of adjectives including relative clauses are inherently symmetric.

Attributives and relatives exhibit divergent syntactic behaviour. To give a few examples, they admit different classes of adjectives (6), behave differently with regard to the temporal interpretation of present participles (see also Stanton 2011) (7), and have differing requirements on the Dutch declensional schwa (Kester 1996) (8).

(6) a. a sorry child
b. a child who is sorry
c. a child (very) sorry (for her actions) (a≠b=c)

(7) a. The jumping cow is dead
b. #The cow jumping in the meadow is dead
c. The cow who was/#is jumping in the meadow is dead

(8) a. elke [voor gehandicapten ongeschikt*(-e)] villa
every for handicapped.people unsuitable-DECL villa
b. elke villa [die voor gehandicapten ongeschikt(*-e) is]
every villa that for handicapped.people unsuitable-DECL is
c. elke villa [ongeschikt(*-e) voor gehandicapten]
every villa unsuitable-DECL for handicapped.people

[1] Reduced relatives have a complexity requirement that disallows them appearing without complements. Additionally, stacked reduced relatives are less acceptable than stacked full relatives, which are in turn less acceptable than coordinated relatives.

These differences pose problems for any attempt to derivationally relate attributives to relative clauses. There are also semantic differences between these categories:

(9) a. a frozen chopped chicken breast b. a chopped frozen chicken breast

(10) a. a chicken breast frozen in the Arctic tundra(,) chopped by Japanese master chefs
b. a chicken breast chopped by Japanese master chefs(,) frozen in the Arctic tundra

(11) a. ?a chicken breast that was frozen in the Arctic tundra(,) that was chopped by Japanese master chefs
b. ?a chicken breast that was chopped by Japanese master chefs(,) that was frozen in the Arctic tundra

In (10) and (11), the chicken is interpreted as having been both chopped and frozen. There is a preference for interpreting the first event in the string as having happened before the second, but this preference is easily overcome by adding appropriate temporal modifiers. Moreover the same preference holds if the clauses are conjoined rather than stacked. However, the interpretation in (9) is subtly different: here, the chicken breast is interpreted as being in the state depicted by the modifier closest to the noun at the time that the other state is brought about. This stricter interpretation does not hold of the relative clauses.

The relationship between the relative clauses and the noun in both (10) and (11) is symmetric: the interpretation is essentially the same regardless of the order of the modifiers, and is not affected by introducing conjunction. The same is not true of the attributives: here the order of the modifiers makes a difference to the meaning, and the meaning is changed in conjunction:

(12) a <chopped and> frozen <and chopped> chicken breast

The data above indicate that attributive modifiers always take scope over their syntactic sister, including any lower modifiers it contains. This can clearly be seen in (1b), (4) and (5). It is less clear in (1a), but true nonetheless. Adjectives that are subject to ordering restrictions are interpreted with respect to a comparison class: a *red ball* is something that is relatively red for a ball, or for a toy, or for objects under discussion. This is not the case in (4) and (5): a *former actress* is not someone who is relatively former for an actress. However, the nature of the comparison class of ordered adjectives like those in (1) is not fixed (see Heim 1998). Nonetheless, the comparison classes for multiple ordered adjectives modifying the same noun must be the same in neutral contexts: a *small red apple* is usually something that is both small and red for an apple, or for a piece of fruit, or for objects in the immediate environment. It will not be something that is red for an apple and small for everything in the grocery store. If the comparison classes for multiple ordered adjectives must be the same in neutral contexts (precisely when this order is found) then the effects of scopal interactions between these adjectives is invisible, and the interpretation akin to the symmetric semantics of relatives. If the higher adjective scopes over the lower with the same comparison class, *red* will pick out of the set of apples the ones that are red for the comparison class and then *big* will pick out of the resulting set the ones that are big for that comparison class. However, the resulting set will be the same as if *big* had applied first and *red* second: the set of apples that are both big and red for the comparison class. (1a) therefore does demonstrate scope effects in line with all other attributives and unlike relative clauses, further evidence against a dual-source analysis.

Overall, attribution is characterized by the applicability of ordering restrictions, a number of syntactic behaviours, and asymmetric semantics. These characteristics hold regardless of whether the adjective in question can appear predicatively. Furthermore, relative clauses, whether full or reduced, do not share the same behaviour. For these reasons, an analysis in which attributives all share the same attributive source with the properties discussed above is superior to one in which some or all adjectives are derived from relative clauses. This single-source approach provides a more empirically valid analysis of attribution and a simpler overall picture of nominal modification.

Topical controllers of gender agreement

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Gender agreement in the Arawa family from Brazil has generated a notable amount of interest concerning which components of grammar can control morphosyntactic processes. In particular, it has called into question which elements of an NP can trigger gender agreement in the clausal domain (Dixon 1995, Dixon 2000, Vogel 1989). For instance, in Jarawara (ISO 639-3:jaa), alienably possessed entities in an NP with a nominal possessor determine the gender value of the phrase for the purposes of agreement (1). Conversely NPs referring to inalienably possessed entities control agreement with the gender value of the possessor, not the possessed and in some cases the possessor determines the form of the possessed item itself (2). This has the surface effect of making the form of the possessed item realise the inherent gender of the possessor.

(1) Okomobi kaa jimawa ino-ke/*-ka

Okomobi(M) POSS knife(F) be.sharp-DEC.F/*DEC.M

'Okomobi's knife is sharp.' (Dixon 2000: 488)

(2) a. Okomobi mano/*mani koma-ka/*-ke

Okomobi(M) arm.M/*arm.F be.sore-DEC.M/DEC.F

'Okomobi's arm is sore.'

b. Manira mani/*mano koma-ke/*-ka

Manira(F) arm.F/*arm.M be.sore-DEC.F/*DEC.M

'Manira's arm is sore.' (Dixon 2000: 490)

Since agreement is generally assumed to target clausal arguments, data of this kind indicates that the possessor behaves, fully or partially, as if it were a clause-level element, even when there is no independent evidence that it is external to the possessive NP which is functioning as an argument. Such 'prominent internal possessors' (PIPs) can be said to exhibit a certain level of syntactic and semantic prominence (Dalrymple and Nikolaeva 2011, Ritchie 2015).

In this paper, I argue that verbal predicates in Jarawara agree with the gender feature of an internal possessor (rather than with the semantic head of the relevant NP) because (i) inalienable entities are typically construed as entering into a part-whole relation with their possessor and (ii) the possessor assumes a discourse-prominent role in information structure. Inalienable possessors trigger predicate agreement not because they are the head of the NP in which they are contained (cf. Dixon 2000), but rather because inalienable possessors in Jarawara behave in a similar way to other 'best possible candidate' phrases that control agreement. Evidence for this view comes from agreement patterns in two types of transitive clause. In A-constructions, a topical A argument controls agreement. In O-constructions, where a third person patient argument outranks another candidate argument in terms of its topicality, the object controls agreement.

Similar data from Paumari (ISO 639-3: pad) demonstrates that the value of gender agreement in the clausal domain is also determined by a topical pivot, which varies based on the information structural properties of a sentence. Agreement normally follows an ergative/absolutive alignment pattern. For instance, in (3) the demonstrative pronoun *ada* controls masculine agreement on the verb. It gets its gender value from the head of

its associated referent, *Mary's mat,* which forms a separate constituent. Unlike in Jarawara, inalienable possessors cannot control agreement on the predicate.

(3)

o-raba-'a-ha	ada	Maria	joram
1SG-weave-ASP-THEME.M	DEM.M	Mary(F)	mat(M)

'I wove Mary's sleeping mat.'

(Chapman and Derbyshire 1986: 257)

A transitive subject (A) may also control verbal agreement if it is postverbal and the direct object precedes the verb (Chapman and Derbyshire 1986: 288) as in (4), where the O argument *maravira* 'fan' is topical:

(4)

maravi-ra	namonaha-hi	ida	mamai
fan-OBJ	make-THEME.F	DEM.F	mother(F)

'Mother made a fan.'

(Chapman and Derbyshire 1986: 289)

Since the post-verbal demonstratives in Paumari are not part of the NP, but form a separate constituent (Chapman and Derbyshire 1986: 261), they fulfil a special pronominal function within the clause. Verbs agree with the demonstrative in gender, and the demonstratives always share the gender value of the possessed (head) noun in an NP. In Jarawara, where there is no pronoun, inalienable possessors are free to assume the role of controller in the absence of a better topic-worthy candidate.

The data demonstrate two different ways in which agreement is determined by information structure. It provides evidence that discourse prominence effects give rise to conditions that favour gender agreement with atypical controllers (inalienable possessor internal to an NP, or as a less-topical A arguments) and suggests that agreement is possible with a less canonical controller, if no other better candidate is available. In turn, this indicates that headedness is only one factor in determining the controller of agreement and that an adequate model of language must allow certain information structural constraints to over-ride robust syntactic ones for determining how the features values of (sub-elements of a) phrase participate in morphosyntactic processes.

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Towards a typology of distributed exponence.

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Distributed exponence (D.E.) is the occurrence of multiple realisations of a single morphosyntactic feature value, or bundle of feature values, within a single word; in addition, no individual realisation alone is sufficient to determine that feature value. A clear example of this comes from Nen, a Yam family language spoken in southern New Guinea. Consider the partial paradigm of *tromngr* 'be erected' in (1) adapted from Evans (2015).

1. SG y-trom-ngr
   DL yä-trom-aran
   PL yä-trom-ngr

In this example, there is no single morphological element which indicates 'plural'. Instead we must say that 'plural' is indicated by the combination of both the prefix *yä*, 'non-singular', and the suffix *ngr*, 'non-dual.' In this way, the *exponence* of 'plural' is *distributed* over the prefix and the suffix.

From within the typology of exponence, D.E. may be characterised as the interaction between **multiple exponence** and **contrastive syncretism**. Multiple exponence is the multiple marking of inflectional features within a single word (Matthews 1974), (Harris 2017); whilst D.E. additionally involves a specific pattern of syncretism. In example (1), each affix marking 'plural' is syncretic with another affix in the paradigm, i.e. prefix is also syncretic with the dual and the suffix with the singular. Thus, determining the feature value/s of the inflected word is impossible until all affixes are considered and it is only once they are considered are the feature values are fully **specified**.

From my preliminary survey, D.E. may be classified as either **coherent** or **morphomic.** In coherent D.E., the syncretism is driven by natural, i.e. semantically coherent, categories. This is the type of D.E. presented in (1), in which each affix realises a coherent category, i.e. non-singular and non-dual. In morphomic D.E., syncretism is driven by more complex categories, i.e. intersections of semantically unrelated feature values. **Mixed** systems are also possible. Orthogonal to this, D.E. may be characterised as being **partially** or **fully** specified across cross-cutting feature values. Finally, D.E. may be classified as to whether the syncretic feature values are values of a **single feature** or values of **orthogonal features**.

This phenomenon proposes interesting problems for our understanding of inflection. This a clear problem for any incremental approaches to morphology, especially morpheme based approaches, since identifying what each element is contributing can be difficult. D.E. also raises significant broader issues from both evolutionary and cognitive perspectives as an entirely counter-intuitive means of marking grammatical information on a word.

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***Zero > multiple > single*.**
An acquisition-based approach to complementation from Latin to Romance

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Finite clausal complementation in the passage from Latin to Romance underwent a huge structural change. In particular, whereas in Latin the canonical form of sentential complementation, the AcI (1), involved a non-finite head-final CP with a null complementiser (cf. Cecchetto & Oniga 2002; Ledgeway 2012), the Romance languages have innovated finite head-initial CPs introduced by a finite complementiser. While the majority of Romance languages present just one finite complementiser in all contexts continuing Lat. QUID (e.g. Fr./Sp. *que*, It. *che*), Romanian displays a dual complementiser system (i.e. *să* and *că*; 2) and southern Italian dialects present both dual (i.e. *ca* and *che*; 3) and triple complementiser systems (i.e. *ca*, *che* and *cu*; 4).

(1) a. populus me uere iurasse iurauit
people.NOM.SG me.ACC truly swear.INF swear.PRF.3SG
'the people swore that I had sworn truly'
(*Latin*, Cicero, *Epistulae ad familiaris, 5.2.7)*

(2) a. sper *să* plece maîne la Londra
I.hope COMP leave.SUBJ.3SG tomorrow to London

b. Ioana știa *că* va lua examenul
Ioana knew COMP will take.INF the.exam
(*Romanian*)

(3) a. ne' vvapenzete *ca* ji' cande pe' vvoje
not think.PRES.IND.3PL COMP I sing for you

b. vurreje *che* ss' affacciasse la patrone
I.want.COND COMP CL would.appear the master
(*Lanciano*, Rohlfs 1983:153)

(4) a. paro *ca* tuneva gli mazzosalato i mu faceva male gli zimeo
it.seems COMP hold.IMP.3SG the salt and CL do.IMP.3SG hurt the butt

b. po' dici *che* ci batte 'n pett
then you.say COMP CL beat.IND.1PL in chest

c. uria *cu* nun fussi mai unuta
I.want.COND COMP not be.SUBJ.IMP.2SG never come.F
(*Ferentino*)

Alongside the existence of dual/triple (viz. multiple) complementiser systems in Romance, we also find the frequent subsequent generalisation of just one of these complementisers to the detriment of the other(s) in many Italo-Romance varieties. Therefore, the development from *zero* > *multiple* > *single* represents a natural cross-linguistic diachronic path.

In the light of these developments in the observed complementiser systems, this paper has two central goals:

(i) to provide a detailed overview of the mechanisms and processes involved in the diachronic path *zero* > *multiple* > *single*. Crucially, in Romance the different complementisers behave not simply as morphological variants (i.e. monofunctionality: multiple forms, same function; cf. Duffield 2013) but lexicalise different functional projections. Assuming a feature-based approach, the central idea here is that the size of the CP appears to be variable in Romance. Different degrees of functional structure within the C-domain depend on selection (cf. a.o. Grimshaw 1979; Pesetsky 1982; Svenonius 1994; Adger 2003; Ramchand 2008) and on featural variation on a single head. For instance, a selecting predicate determines whether its complement CP will be finite or non-finite. Similarly, the matrix predicate dictates locally the (morphosyntactic) properties of the multi-featural C head and its projection. Specifically, the selectional features on C dictate whether we can have a small, a big or a structurally variable CP.

(ii) to fit the diachronic path *zero* > *multiple* > *single* within an acquisition-based approach to diachronic change (Biberauer 2015, 2016; Biberauer & Roberts 2015; see also Willis 2016). Assuming that language change comes from the 'inside', namely the child (re)analyses a lexical item or structure in a more economical way and in the right sequence (Gibson & Wexler 1994; Fodor 1998; Evers & van Kampen 2008), the *zero* > *multiple* > *single* path gives insight into the 3rd Factor (F3) of language design (viz. non-language-specific cognitive optimisation strategies; Chomsky 2005). Specifically, following Biberauer's (2015, 2016; see also Biberauer et al. 2014) *Maximise Minimal Means* idea within a feature-based generative analysis, F3 represents a general cognitive economy principle which has two linguistic manifestations: Feature Economy (FE; viz. postulate as few formal features as possible; Roberts & Roussou 2003) and Input Generalisation (IG; viz. maximise available features; Roberts 2007; Biberauer 2015). FE and IG constitute a minimax optimisation procedure which creates a NONE>ALL>SOME learning path: postulate NO(NE) [F]eatures (satisfies FE and IG); posit [F] in ALL possible domains (satisfies IG but not FE); posit [F] in only SOME possible domains (Biberauer & Roberts 2015; Biberauer 2016).

In this respect, in the passage from Latin to Romance the *zero* > *multiple* > *single* path precisely reflects the ability of C to host diachronically NONE>ALL>SOME [F] (i.e. NONE/Latin > ALL/Romanian/Italo-Romance > SOME/Romance). NONE is the default choice as the acquirer experiences the non-existence of [F] (i.e. no features on C in Latin as default starting point); ALL represents a generalisation of [F] following the acquirer's initial 'ignorance' (i.e. all features possible on C in Romanian and Italo-Romance) and SOME is the situation in which [F] is present in some domains and absent in others (i.e. some features on C in (the rest of) Romance).

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Contact, Community and Grime: The Emergence of /q/ Among Young Londoners.

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The youth of Northern Europe's largest cities are at the forefront of a linguistic revolution. The creation of vibrant, diverse cities through large-scale immigration to inner-city areas, in Germany and Sweden among others, is epitomised by London, where foreign-born populations rose by 54% between 2001 and 2011, an increase of 1,055,360 (UK Census 2011). Crucially, 22% of the population do not have English as their main language (The Migration Observatory 2013); the result is a vast multilingual social space. For example, Hackney's primary schools contain 26 different languages (Baker and Eversley 2000). In this paper, I analyse the emergence of /q/ in Multicultural London English (MLE) as a consequence of migration and changing youth culture, finding independent correlations between /q/ use and ethnicity, gender and Grime.

Young people across London have created a new, diverse, innovative variety, compiled of features from their various L1 languages, traditional London varieties, and innovative forms. These varieties, typically used by the inner-city working-class, are known as multi-ethnolects, and are used by all ethnicities within Northern Europe's 'Multicultural Metropolises' (Cheshire et al 2013). MLE features are shown to be prevalent among white British working-class inner-city Londoners, but are used less frequently than among ethnic minorities (Kerswill 2013).

Phonological features distinct to MLE have been reported, such as the full reinstatement of /h/, and the narrowing of diphthongs (near-monophthongisation) in the FACE, PRICE and GOAT vowels (Kerswill 2014:3, Cheshire et al 2015). /k/→/q/ backing, a phenomenon in which velar stops become uvular stops when preceding low back vowels (/ɑ/ and /ʌ/) is another innovative form original to MLE (Kerswill et al 2006). However, no detailed report on its social distribution is available. I will discuss the idea that the use of /q/ in MLE may be of Arabic origin.

93 students (16-23 years old) from 26 boroughs were interviewed in their schools. All participants had lived in London for over ten years or more than half of their life, and covered seven ethnic categories, with 32 hailing from inner-boroughs, and 61 from outer-boroughs. The target feature was elicited through a wordlist, and a text related to the London Olympic Games. Participants also filled out a questionnaire for information on age, gender, ethnicity, class, birthplace, parents' birthplace, musical association and where participants have lived, as well as a secondary questionnaire on their exposure to Grime, a music genre that emerged in London in the early 2000s.

Using data generated from both auditory and acoustic analysis of 23 tokens per participant across both the wordlist and text, it will be shown that /k/→/q/ backing seems to be marked by gender and ethnicity, is spreading to London's traditionally non-MLE speaking outer-boroughs, and is prevalent among middle-class youths. This is in sharp contrast to previous research. Reflecting on this surprising finding to the literature on MLE, this paper analyses the emergence of /q/ in the multi-ethnolect outside of traditional sociolinguistic framework, as the social context is unique and too complex to conceptualise most of MLE's phonological social

distribution patterns. Instead, findings will be discussed within the framework of Mufwene's Feature Pool Theory (2001) and Rampton's Code Switching Approach (2010). I pay particular attention to the increasing economic and ethnic diversity of London's outer-boroughs and increased contact with MLE speakers, but also to the mainstream success of London's politically-charged, inner-city underground music scene: Grime.

Borne out of London's black cultural tradition, Grime epitomises the life of young, marginalised, predominantly black working-class, inner-city Londoners (Bramwell 2015), giving a voice to disillusioned youths and creating a resistance to the mainstream (Platt 2010). It has existed since the turn of the century, only recently elevating itself into the mainstream.

The elevation of Grime into the mainstream, epitomised by the chart success of Stormzy's 'Gang Signs and Prayer', has broadcasted MLE further than the streets of inner-city London, shaking up its enregisterment in the process (Daly 2017). In a rather surprising turn, many in the media have begun to positively label Multicultural London English as 'the language of Grime', rather than more belittling terms such as 'Jafaican'. Grime figures embrace the diversity within London, and despite originally hailing from inner East London, there are now emerging scenes in outer-London, such as in Thornton Heath, Croydon (Stormzy, Section Boyz, Krept and Konan), where artists describe themselves as "children of Grime".

I collected information on Grime involvement and attitudes to Grime from the speakers, and found that among these young Londoners, there is a strong and significant correlation between Grime listeners and /q/ frequency, independent of ethnicity, class or location. As a genre, the inherently 'London' Grime seems to be able to grasp the attention of young Londoners from diverse backgrounds, potentially allowing these speakers to adopt features that otherwise are strong inner-city ethnic and gender markers. With regards to the influence of the media on language, I will refer to work by Stuart-Smith et al (2014) which shows the strong psychological effect that the media and popular culture can have on language. In line with the literature on Hip-Hop National Language, this report tentatively concludes that London may be in the process of creating its own unique language variety based on musical culture and ideology - London Grime Language (LGL).

Towards a Typology of Phonological Processes in the Adaptation of Anglicisms

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Anglicisms are a visible and productive lexical stratum in many European languages (Görlach 2001). The purpose of this paper is to compare their phonological adaptation in three languages (French – FR, German – DE, and Czech – CS), using the theoretical framework of Loanword Phonology (Calabrese & Wetzels 2009; Kang 2011). Three primary adaptation principles can be identified (Duběda 2016, cf. Fig. 1):

- Phonological approximation (substitution of foreign phonological units with domestic ones on the basis of perceptual proximity, available phonological contrasts and convention; phonotactic normalisation);
- Spelling pronunciation (derivation of the phonological form from the graphemic structure of the word, using rules of the target language);
- Native-like pronunciation.

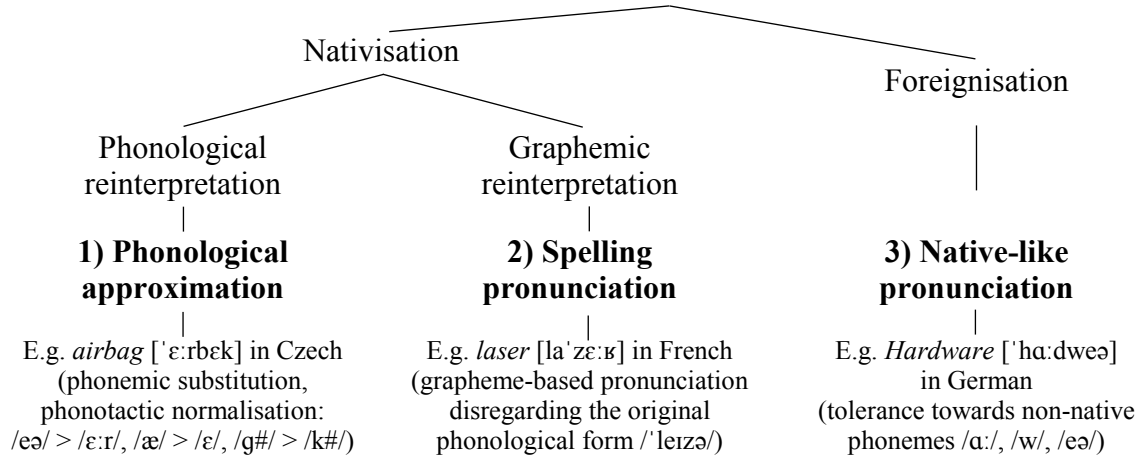

Fig. 1: The three primary principles of phonological adaptation.

The analysis is based on a sample of 219 most frequent Anglicisms present simultaneously in all three languages. Each item was provided with the original phonological form and three target forms, as indicated by authoritative dictionaries (cf. References), e.g. *jackpot*: EN [ˈʤækpɒt], FR [dʒakˈpɔt/ʒakˈpɔt], DE [ˈʤækpɔt], CS [ˈʤɛkpɔt].

Each target phonological form was then classified according to the identified adaptation principles. The following categories were established:

- APPROX – phonological approximation, e.g. FR *feed-back* [fidˈbak]
- SPELL – spelling pronunciation, e.g. FR *label* [laˈbɛl]
- NAT – native-like pronunciation, e.g. DE *Hardware* [ˈhɑːdweə]
- APPROX=SPELL – phonological form that can be explained interchangeably by phonological approximation and spelling, e.g. CS *drift* [ˈdrɪft]
- APPROX+SPELL – combination of two principles within the same entry, e.g. FR *boy-scout* [bɔjˈskut]
- APPROX/SPELL – two co-existing variants, e.g. FR *pipeline* [pipˈlin/pajpˈlajn]
- APPROX/NAT – two co-existing variants, e.g. DE *Badminton* [ˈbɛtmɪntən/ˈbædmɪntən]

As it appears from Figure 2, showing the relative weight of adaptation processes, phonological approximation seems to be the fundamental principle in all three languages

analysed, both alone and in combination with other principles. Spelling pronunciation has the greatest impact in French. Native-like pronunciation is only active in German.

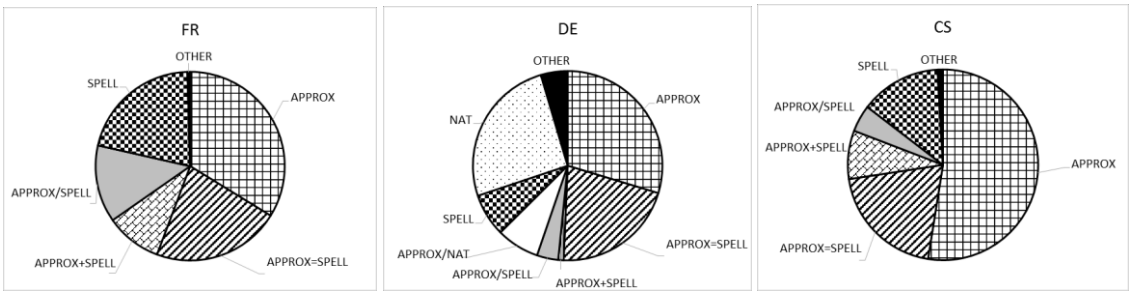

Fig. 2: Adaptation processes in the sample.

The rules of phonological approximation, illustrated in Table 2, define the projection of the English phonological system onto the target systems. Apart from one-to-one phoneme mapping, we observe total or partial phoneme mergers, as well as context-sensitive phoneme mapping. These changes do not affect contrastivity, as no case of adaptation-induced homophony was observed. British pronunciation clearly prevails among the source forms.

EN				FR			DE			CS		
iː		uː		i		u	iː		uː	iː		uː
ɪ		ʊ					ɪ		ʊ	ɪ		u
e	ə	ɜː	ɔː	e/ɛ	œ	o/ɔ	ɛ	ɐ/ə	øː/œ	o(ː)	ɛ/ɽ	ɛː	oː
	ʌ		ɒ			ɔ		a		ɔ	a		o
æ		ɑː		a				a(ː)			aː		

Tab. 1: Phonological approximation of the English vowel system.

The ratio between individual adaptation principles, as well as the degree of isomorphism in phonological approximation determine the rate of global "phonological invasiveness" of each language. This rate increases in the order German < Czech < French.

The analysis is limited to standard pronunciation as reflected by dictionaries. The investigation of real usage would undoubtedly unveil greater variability. However, we have good reasons to believe that this variability would be explainable by the competition of the same principles as mentioned above.

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Adverbial clauses: relating internal and external syntax

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This paper speculates on the relation between the external syntax and the internal syntax of adverbial clauses, and postulates that the merge site of an adverbial clause, i.e. its external syntax, is determined by its internal syntax. As illustrated by (1), the conjunction *while* may contribute two distinct readings to the clause it introduces. In (1a), *while*$_1$ means roughly 'during the time that'; in (1b), *while*$_2$ is near-equivalent to *whereas*. In other words: in (1a) the *while* clause structures the event, that in (1b) structures the discourse, highlighting the felicitous context of the associated proposition. Simira patterns are found with other conjunctions such as *as, since, if, when*. We call *while*$_1$ clauses 'central' adverbial clauses and *while*$_2$ clauses 'peripheral' adverbial clauses, reflecting the degree of syntactic integration of the clause types (Haegeman 2012a etc).

(1) a. My father worked at the department while$_1$ Clinton was governor of Arkansas.
b. While$_2$ Bill Clinton was governor of Arkansas, his wife was senator of New York.

1 External Syntax Central adverbial clauses only coordinate with central adverbial clauses and peripheral adverbial clauses only coordinate with peripheral adverbial clauses (Haegeman 2012a: 164-165). If coordination is subject to Williams' (1978) 'Law of Coordination of Likes'), the restriction may be interpreted to mean that constituents merged in distinct positions in the tree cannot coordinate (cf. Huddleston and Pullum 2006). The restriction on coordination of the two adverbial clause types then suggests that peripheral adverbial clauses and central adverbial clauses differ in their external syntax, i.e. they are merged at different points in the tree. As a first approximation, being modifiers of a IP contained domain, central adverbial clauses are merged in the IP area, while peripheral adverbial clauses, modifying a higher domain, are merged in the CP area or above. The paper will present further support for this hypothesis drawn from, a.o. scope effects, VP anaphora, VP ellipsis, parasitic gap licensing and temporal subordination (cf. Hornstein 1993).

2 Internal Syntax Central adverbial clauses and peripheral adverbial clauses differ in terms of their internal syntax, with peripheral adverbial clauses sharing some semantic/syntactic properties with main clauses. One piece of empirical support for this claim is the fact that in English argument-fronting is banned from central adverbial clauses, but remains possible in peripheral adverbial clauses, as shown in (2). Since Hooper and Thompson (1973), the availability of argument fronting in English has been related with the availability of assertion, itself a main clause property (cf. Haegeman (2012a, 2012b) for evaluation and for references).

(2) a. *We discovered something else while this paper we were writing
b. His face not many admired, while his character still fewer felt they could praise. (Quirk et al 1985: 1378)

Central adverbial clauses are not asserted but presupposed, they lack independent illocutionary force, and are an integral part of the speech act expressed in the superordinate clause; peripheral clauses have their own illocutionary potential (cf. Declerck and Reed 2001: 131). That peripheral adverbial clauses encode illocutionary force is further supported by examples such as (3): in (3a) a peripheral *while*-clause contains a hanging topic *(gold*) and a (albeit rhetorical) *wh*-question and in (3b) a peripheral *since* clause contains a (rhetorical) *wh*-question:

(3) a. Oil and electricity are useful, while gold – what's the point of that? (*Independent on Sunday* 30.04.2006, page 4, col. 2)
b. These assumptions can be irritating, since who is this naive, unquestioning, plural intelligence identified as 'we'? (*Observer Review* 23.11.2008, page 12, col. 4)

It has also often been pointed out that adverbial clauses, and in particular conditional clauses, resist speaker-oriented modal expressions (Stowell (2004), Nilsen (2004), Zagona (2007) and Ernst (2007, 2009). In terms Cinque's functional sequence of modal markers (1999, 2004:

133), the topmost four expressions of modality are not easily compatible with central adverbial clauses, but are compatible with peripheral adverbial clauses, as shown in (4) for English. (4a) contains an illicit speech act modal, (4b) illustrates a conditional assertion (i.e. a peripheral conditional) containing a licit epistemic modal. Cf. Haegeman (2010) and the references for discussion and crosslinguistic support.

(4) a. * If they luckily arrived on time, we will be saved (Ernst 2007: 1027, Nilsen 2004).
b. If Le Pen will probably win, Jospin must be disappointed. (Nilsen 2004: 811: note 5)

3 Relating external and internal syntax Informally speaking, a correlation emerges between the internal syntax of adverbial clauses and their external syntax: "the more structure is manifested in the adverbial clause, the higher it is merged". This paper develops a derivational account for this correlation. The proposal adopts the movement derivation of adverbial clauses, according to which adverbial clauses are derived like relative clauses by movement of a specific IP-related operator to the left periphery. This derivation goes back to work by Geis (1970, cited in Ross 1967: 211), Reuland (1979), Larson (1985, 1987, 1990), Johnson (1988), Declerck (1997), Lycan (2001), and has more recently been explored again by, a.o. Demirdache and Uribe-Etxebarria (2004, 2012), Bhatt and Pancheva (2006), Zentz (2011) and Haegeman (2012a,b). Assuming that specialised operators are involved in the derivation of the adverbial clauses (aspectual, temporal, modal, etc) and that such operators have a different clause-internal launch site (aspectual, temporal, modal etc), the label of the adverbial clause is determined by the nature of the moved operator.

Once formed, the adverbial clause merges with the clause it modifies. To account for the observed correlation between "size" of the clause and "level" of integration, our hypothesis is that merger of clauses requires a matching relation. See also Frey (2011), for a matching condition on peripheral adverbial clauses. For a more general formulation of matching as a condition for merge cf. Williams (2009: 6), according to whom "the point at which embedding is done is determined by the "size" of the clause being embedded".

The phenomenon of 'adverbial concord' reported in the literature on Japanese (Minami 1974, Noda 1989, 2002) provides suggestive empirical support for the matching hypothesis governing the merger of adverbial clauses. 'Adverbial concord' is the phenomenon whereby the presence of an adverbial clause correlates with the presence of a matching functional particle in the matrix clause it modifies. Additional support for a matching hypothesis will be provided on the basis of the properties of Polish counterfactual conditional clauses and their relation to the matrix functional domain (Tomaszewicz 2009, 2011) and from Dutch patterns in which central conditional or temporal clauses preceding a V2 clause appear to impose (surprising) restrictions on the internal syntax of the clause with which they merge (Greco and Haegeman 2017).

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The idiosyncrasy of learning

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Many aspects of language appear to be learned. As learners need to *induce* everything they learn, from the meanings of words to grammatical regularities, there are legions of factors that might derail inductive inference. Accordingly, the descriptions of the underlying learning processes range from general associative or symbolic mechanisms to optimal Bayesian inference. These approaches have often been contrasted using artificial language learning studies, where adults, infants and occasionally non-human animals are passively exposed to highly simplified languages, and have to (implicitly) learn the words contained in these languages, or their underlying grammatical structure.

Here, I review a series of studies suggesting that neither general associative or symbolic mechanisms, nor optimal Bayesian inference describe learning. Rather, just as other animals have a variety of specialized learning mechanisms, learning succeeds only insofar as the inferences match available perceptual or memory primitives, that is, basic psychological mechanisms that are not specific to language and have been observed in other animals, but support the acquisition of certain rules.

I review two such primitives that are particularly relevant to language – a sensitivity to identity relations (e.g., reduplications), a sensitivity to edges of sequences (e.g., affixation patterns), and their interactions. There seems to be a specialized mechanism processing identity relations that makes identity-relations highly salient, to that extent that even human adults fail to learn other equally simple structures. Critically, the relative saliency of repetition-pattern appears inconsistent with extant Bayesian ideal observer models. Likewise, when participants have to learn both affixation and reduplication patterns, they do not optimally integrate the information. Rather, they myopically learn both patterns independently, and let the more salient pattern drive their responses.

These primitives are not only important for learning rule-like regularities, but also for acquiring word-like units. In fluent speech, words do not occur as isolated units. As a result, to learn the acoustic or phonological units that correspond to words, learners have to infer where words start and end, a problem that is known as the *segmentation problem*. There seems to be widespread agreement that statistical computations, notably Transitional Probabilities, might offer a solution to the segmentation problem: learners might postulate word boundaries at regions of low Transitional Probabilities. However, a minimal requirement of any mechanism that solves the segmentation problem is that it allows word candidates to be placed in memory, and the output of Transitional Probabilities likely has format that is incompatible with that of words. Rather, words appear to be stored using an edge-based memory format – the order of constituents of words (and other sequences) is determined with respect to the word edges. In line with this view, I show that, unless edge information is given, learners believe to be more familiar with high Transitional Probability items they have never heard compared to low Transitional Probabilities they have heard. This result was obtained both with linguistic sequences and with an analogous learning problem in vision, and is problematic for the view that words are stored using a mechanisms based on Transitional Probabilities. Further, I show that these statistical computations are not optimal in Bayesian sense. Rather, earlier claims of optimal statistical learning reflect perceptual biases to attend to edges of items. Accordingly, learning does not show the signatures of optimal learning when these biases are controlled for.

Taken together, the learning of even highly simplified regularities proceeds in a fairly myopic way, and is highly constrained by the availability of appropriate primitives. Critically, however, at least some of these constraints seem to be reflected in the typological distribution

of regularities, and might alleviate the difficulty of the various induction problems learners face.

Cross-linguistic effects in written corpora from contact situations: diachronic and psycholinguistic perspectives

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Since Andersen's article (1973) on logically possible modes of language change (abductive and deductive innovations) which discusses the transmission of language from one generation to the next, the field of historical linguistics has acknowledged a tight link between language acquisition and change. The so-called "logical problem of language change", identified by Niyogi & Berwick (1995), raised the question as to how languages can possibly change if every generation successfully acquires the grammar of their parents. Historical linguists were from then on confronted with explaining transmission by also taking into account aspects of acquisition. Research in language acquisition from a generative perspective, on the other hand, has faced the parallel "logical problem of language acquisition" (Chomsky 1965, 1981), dealing with the puzzle of how it is possible that children can acquire the complex knowledge system of language relatively fast, seemingly effortlessly and despite necessarily underdetermined input.

One of the major challenges in linking the disciplines of historical linguistics and language acquisition is the methodological hurdle of comparing very different data sets. On the one hand, historical linguists necessarily only have written data available and seek to identify properties of the speaker's I-language indirectly by looking at E-language (terms used according to Lightfoot 2006). Researchers in first language acquisition, on the other hand, mainly work with spontaneous or elicited spoken data or conduct psycholinguistic experiments to investigate language processing with the aim to learn more about the speaker's I-language. Still, both disciplines are aware of the fact that the the input speakers are exposed to and the transmission of language over time are crucial factors for a better understanding of both phenomena. This becomes even clearer when contact-induced change and bilingualism come into play because the interaction of two systems may lead to cross-linguistic effects that persist into adolescence and adulthood, that can be seen as a prime instigator for the propagation of innovations in a speech community. Factors like processing, congruence of competing variants, priming effects and their uptake in production (tolerance) can be considered prerequisites for the transmission of innovative forms in language acquisition (Fernández et al. 2016; Yang & Montrul 2016) and they are equally important for historical linguists in their explanations of why changes are "successful" (permanent) or "fail" (temporary).

This paper addresses methodological issues in investigating language acquisition and change and seeks to identify parallels in the way both disciplines work with written corpora and in the way they interpret findings in these corpora. We pursue the argument that written data does not necessarily have to be an impediment to investigating language competence. As for cross-linguistic phenomena, written data may in fact prove advantageous. Thus, if transfer occurs even in the written modality, it must be sufficiently anchored in speakers' grammar to escape conscious monitoring and inhibition of the other language. As such, these transfer effects give us valuable clues as to the status of these contact-induced forms in speakers' minds. That is, they have probably become part of their language system and cannot be seen as merely ad-hoc interferences from the other language. As such, they may constitute promising candidates for "successful" changes in the language system. Moreover, if we find similar cross-linguistic phenomena in diachronic and acquisition corpora, this would strengthen the argument put forth by Meisel (2011) that bilingual children are the locus of language change.

To this aim, we investigate parallels in cross-linguistic phenomena from two very different written data sets from bilingual speakers (Germanic-Romance): a) a historical

Middle English corpus with evidence of lexico-syntactic transfer from Old French (Penn-Helsinki Parsed Corpus of Middle English, PPCME2), and b) German corpus of written exams (essays) composed by adolescent German-Italian bilingual speakers from the contact region of South Tyrol (Northern Italy). Both corpora show parallels in divergences in argument structure, particularly with regard to the realization of indirect objects as PPs, which may be the result of cross-linguistic influence.

The examples in (1) and (2) show findings from a corpus-based historical study of copying of syntactic structures from Old French (OF) to Middle English (ME) in the class of psych verbs. In ME times *plesen* came into English via OF ('plaire', Anglo-Norman 'plaisir'), native verbs with a similar meaning were *cwemen* and *liken*. It can be observed that *plesen* was copied along with its semantic and syntactic properties, i.e. the syntactic representation of the indirect object is marked by a PP:

(1) For God wasted þe bones of hem þat **plesen to men**.
for God rejected the requests of them that please to men
'Because God rejected the requests of those who please men.' (EARLPS,63.2771,M2)

In the Ayenbite of Inwyt (1340) which is a ME text based on a French original we see that the native verbs from the same semantic verb class (*cwemen* and *liken*) also occur with a PP, and it is quite obvious that the construction is directly copied on the model of OF:

(2) and do þet kuead / uor to **kueme** kueadliche **to þe wordle**
and do that evil for to please wickedly to the world
'... and do evil to wickedly please the world.' (AYENBI,26.403,M2)
French original:
et fere le mal pour **plere** mauvesement **au monde**.
and do the evil to please wickedly to the world (SOMME-ch32-par687)

The database from adolescent bilinguals in South Tyrol (Bolzano/Bozen Corpus) shows similar patterns of transfer of the lexico-semantic properties of highly frequent verbs from Italian into speakers' German, as exemplified by (3) and (4).

(3) […] alle Teilnehmer […] **gaben an** alle Vertreter einen freundlichen Applaus. (ital. *dare a*)
(Standard German: ... gaben allen Vertretern einen freundlichen Applaus)
all participants applauded the representatives

(4) Am Ende ~~dürften~~ konnte das zahlreiche erschien~~den~~<enden> Publikum **an den Referenten ~~F~~ Fragen stellen**. (ital. *chiedere a*)
(Standard German: ... konnten dem Referenten Fragen stellen)
at the end the many spectators could pose questions to the speaker

References: Andersen, H. 1973. Abductive and deductive change. Language (49):765–793; Bolzano/Bozen Corpus, The Language Archive, MPI Nijmegen: https://tla.mpi.nl/; Chomsky, N. 1965. Aspects of the Theory of Syntax. MIT, Cambridge Mass.; Chomsky, N. 1981. Lectures on Government and Binding. The Pisa Lectures. Foris, Dordrecht; Niyogi, P. And Berwick, R. C. 1998. The logical problem of language change: A case study of European Portuguese. Syntax, (1(2)):192–205; Kroch, A. and Taylor, A. 2000 (eds). The Penn-Helsinki Parsed Corpus of Middle English 2 (PPCME2). University of Pennsylvania, Philadelphia; Lightfoot, D. 2006. How new languages emerge. Cambridge University Press, Cambridge; Meisel, J. 2011. Bilingual language acquisition and theories of diachronic change: Bilingualism as cause and effect of grammatical change. Bilingualism: Language and Cognition 14(2):121–145; Fernandez, E., de Souza, R. and Carando, A. 2016. Bilingual innovations: Experimental evidence offers clues regarding the psycholinguistics of language change. Bilingualism: Language and Cognition (19):1–18; Yang, C. and Montrul, S. 2016. Learning datives: the tolerance principle in monolingual and bilingual acquisition. Second Language Research 1-26.

The Compatibility Condition on Juxtaposed Interrogative Clauses

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In Japanese Right Dislocation (JRD) construction, interrogative *wh*-phrases cannot appear at the right side of the matrix verb, as exemplified in (1):

(1) *John-wa tabemasita ka, nani-o
John-TOP ate.polite Q what-ACC

In contrast, Negative Polarity Items (NPIs) such as *nani-mo* 'anything' can appear in the dislocated position as in (2):

(2) John-wa tabenakatta yo, nani-mo.
John-TOP did not eat PRT anything

Since both an interrogative *wh*-phrase and an NPI have to be syntactically licensed by a Q-particle and a NEG head, respectively, the difference of acceptability requires an explanation. Although three different approaches have been proposed previously for JRD: Clause-External, Clause-Internal, and Bi-clausal (Leftward movement + deletion) Analysis, we cannot provide a satisfactory explanation in syntactic terms under any approach, because the same structural position would be assigned to the dislocated interrogative *wh*-phrase and the NPI. The answer, therefore, must be found in the semantic/ pragmatic or phonological aspect of the construction. In this paper, assuming that covertly juxtaposed clauses are interpreted independently in the semantic/pragmatic component, we will account for the contrast between (1) and (2) in a unified way under the Bi-Clausal Analysis of JRD constructions.

According to the Bi-Clausal Analysis of JRD, the example in (1) consists of two clauses and has the structure like (3):

(3) [John-wa tabemasita ka], [nani-o ~~[John-wa tabemasita ka]~~]

Assume here that these two clauses are independently transmitted to and interpreted in the semantic component. According to Hamblin's (1973) semantics, the preceding clause in (3) is interpreted as a polar question and creates an alternative set of proposition {John ate, John did not eat}. The negative clause in (2), on the other hand, denotes a set created by the focus of negation; in this case, a set of edible things. We propose that the legitimate interpretation of JRD requires the compatibility of created sets:

(4) The Compatibility Condition on Created Sets
The set created by the preceding clause must contain one of the members of the set created by the following clause.

According to this condition, the ungrammaticality of (1) can be explained as the incompatibility of created sets: the interrogative *wh*-phrase contained in the second clause generates a set of propositions such as {John ate sushi, John ate tempura, …}, which is not contained in the set of propositions created by the preceding yes-no question. In the case of NPI in (2), the *mo*-particle, as a kind of universal quantifier, is taken to contribute the meaning that all the alternatives created by the *wh*-phrase are true, which means that all the members of the set created by the second conjunct are contained by the preceding set created by the first one, thus resulting in an acceptable sentence.

The following pieces of evidence corroborate the relevance of alternative sets to the interpretation of the *wh*-phrase in the right periphery.

A) If we substitute *nani-o* (what) with *docchi* (which), a *wh*-phrase creating the meaning of alternative questions, the sentence becomes grammatical, because both clauses generate an alternative set of proposition {John ate, John did not eat}:

(5) John-wa bangohan-o tabeta no (tabenakatta no), docchi
John-TOP supper-ACCate Q ate Q did not eat Q which

B) As Tanaka (2001) notes, even *nani-o* can occur in the right periphery, when the *wh*-phrase is duplicated, which means that two juxtaposed clauses create the same set of propositions:

(6) John-wa nani-o tabemasita ka, nani-o
John-TOP what-ACC ate.polite Q what-ACC

C) When the affirmative answer to the preceding question is presupposed from the context; in other words, the first conjunct does not create an alternative set, you can say:

(7) When you open the refrigerator door and find out your cake is missing:
keeki tabeta no, dare-ga
cake ate Q who-NOM

The proposal covers the fact that the construction like so-called "sequence of *wh*-questions" exists in Japanese. While an embedded indirect question can be right dislocated (8a), the post-verbal positioning of a clause with a *wh*-phrase intended to have matrix scope is not allowed (8b):

(8) a. John-ga tazuneta yo, [$_{CP}$ Mary-ga nani-o yonda ka]
John-NOM asked PRT Mary-NOM what-ACC read Q
b. *John-wa omotteimasu ka, [$_{CP}$ Mary-ga nani-o yonda ka]
John-NOM think.polite Q Mary-NOM what-ACC read Q

The contrast can be explained along the same line of reasoning by the incompatibility of created sets; the matrix clause in (8b) is interpreted as a polar question, which is incompatible with the set of propositions created by the dislocated embedded clause. Interestingly, when the matrix clause is changed to a *w*h-question by adding *doo* (how), which creates a set of propositions, the sentence becomes grammatical.

(9) John-wa doo omotteimasu ka, [$_{CP}$ Mary-ga nani-o yonda ka]
John-TOP how think.polite Q Mary-NOM what-ACC read Q

In addition, our proposal also predicts that not only *wh*-phrases but also focused elements in general cannot be right dislocated in Japanese when different sets are created, as in (10):

(10) *John-wa wain-dake nomu yo, borudoo-no
John-TOP wine-only drinks PRT Bordeaux-of

In the first conjunct the focus-particle *-dake* (only) creates an alternative set of drinkables and picks up wine out of that set. The second conjunct, on the other hand, creates a set of possible production areas of wine, resulting in the incompatibility of created alternative sets.

The proposal mentioned above can be extended to the analysis of Split Questions discussed in Arregi (2010), "What tree did John plant, an oak?" This type of questions contains two independent interrogative clauses, a *wh*-question and a non-*wh*-question, as illustrated in (11a):

(11) a. [what tree did John plant] [~~Did John plant~~ an oak]
b. {John planted an oak, John planted a cherry, …}
c. {John planted an oak, John did not plant an oak}

The first clause creates a set of possible answers (11b) and the second elliptical clause creates a two-membered set (11c) and functions to narrow down the list of possible answers just to *an oak*. If this extension is on the right track, the Compatibility Condition on Created Sets proposed in (4) is not a condition just on the JRD construction, but a more general condition on the juxtaposition of elliptical interrogative clauses.

To conclude, the analysis proposed here is more successful than its predecessors in respect of empirical coverage, as it offers a natural explanation to different types of juxtaposition of interrogative clauses.

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Particles in Bantu

Hannah Gibson, Rozenn Guérois and Lutz Marten (SOAS University of London)

The grammatical category of particles, such as focus particles, question particles or epistemic particles, has received increasing attention in recent years (cf. Koenig 1991, Zimmermann 2009, Egg 2013). However, most studies focus on European languages, and data from a wider variety of languages have yet to be assessed in detail. The present talk addresses this challenge by providing a comparative-typological analysis of particles in Bantu languages, one of the world's largest language groups.

Particles typically perform grammatical functions and their use is often related to information structure, the expression of subtle semantic, context-sensitive or pragmatic effects.

For example, a common feature of many Bantu languages is the presence of a rich system of focus particles encoding, for example, exclusive (1), scalar (2), and additive (3) focus.

(1) Na-tak-a vi-wili **tu**
SM1SG-want-FV 8-two only
'I want only two (chairs)' (Swahili, Ashton 1947: 158)

(2) a-a-hí-thúm-a **hatá** (ní) e-sapáto
SM1-PAST-PFV.DJ-buy-FV even and 10-shoes
'He even bought shoes' (Makhuwa, Van der Wal 2009: 114)

(3) Rafiki z-angu **pia** wa-li-fik-a
10.friends 10-POSS1sg too SM2-PAST-come-FV
'My friends, too, came' (Swahili, Kez Kic 201:007)

Whilst these particles may be lexical (1-3 above), they are also often morphologically complex, consisting of a conjunctive preposition and an anaphoric pronominal clitic, and in that differ from better described European focus particles like German *auch* or English *too* (4-5).

(4) Wa-geni w-engine **na-o** wa-li-ya-onj-a
2-guests 2-other CONJ-RC2 SM2-PST-OM6-try-FV
'Other guests, too, tasted it [water]' (Swahili, Kez Gam 149:005)

(5) Peter **ná-ye** makúra á ka ghúr-a nkûku.
Peter CONJ-RC1 then SM1 TNS buy-FV chicken
'Thereupon, also Peter went to buy a chicken' (Rugciriku, Möhlig 2005: 87)

Other particles are associated with the epistemic status of the proposition expressed, or related to mirativity, relating to speaker expectation: The Cuwabo particle *peéno* indicates doubt or wondering (6), while the emphatic particle *ki* expresses surprise for something that goes against expectation (7).

(6) áá **peénó**=to míyó ddi-hí-mú-on-á
INTER WOND=then PRO1SG SM1SG-PFV.DJ-OM1-see-FV
'Ahh, I do not know, was I supposed to see her?' (Cuwabo, Guérois 2015: 307)

(7) **Kí** mú-íma o-lí úuvi ?
EMPH 1-child SM1-be where
'Where on earth is the child?' (Cuwabo, Guérois 2015: 308)

Furthermore, a number of Bantu languages have developed negative particles, in many instances reflective of stages of 'Jespersen's cycle' and associated grammaticalisation processes (Devos & van der Auwera 2013). The items often pattern similarly in terms of syntactic behaviour, e.g. appearing in clause-final position, but differ in their morphological form, and so indicate independent grammaticalisation paths (8-10).

(8) Isikʊ vi-viiswi sí v-ój-ire **tʊkʊ**.
today 2-fellow.our NEG SM2-come-PFV NEG
'Today our friends did not come.' (Rangi, Gibson 2012: 72)

(9) Wakesa se-a-a-tim-a **ta**.
Wakesa NEG-SM1-PST-run-FV NEG
'Wekesa did not run.' (Lubukusu, Wasike 2007:243)

(10) Te-bá-som-ere **hai**.
NEG-SM2-read-PFV NEG
'They have not read today.' (Kuria, Cammenga 2004)

A final example of particles in Bantu is provided by question particles. These often display restrictions on syntactic position – typically appearing either clause-initially or clause-finally. Some further exhibit restrictions in terms of the relative ordering with the co-occurrence of question particles (11-12)

(11) Bafana ba-to-tseng-a imoto **yini** **na** ?
2boys SM2-FUT-buy-FV 7car Q Q
'Will boys buy a car?' (siSwati, Thwala 2007)

(12) **Je**, ku-na ma-swali?
INTER 17-COP 6-question
'Are there any questions?' (Swahili, Hus Kin 043:015)

The paper provides a comparative analysis of Bantu particles, in two parts. First, we provide a typological survey of particles in Bantu, taking into account the specific semantic domains associated with particles and their morphological and syntactic characteristics. For this we mainly draw on evidence from better described languages, such as Swahili, Luganda and siSwati, or those with a particular remarkable particle system, such epistemic particles in Cuwbao, shown above. Second, we focus on three groups of particles – negative, question, and focus particles – and analyse their cross-linguistic and geographic distribution based on a larger comparative database of Bantu morphosyntax which includes evidence from 23 Bantu languages. The languages are distributed across the Bantu-speaking area, and for each language we note the presence of any of the three kinds of particles and how they interact with other relative formatives in the language. Results of the paper illustrate the complex inventory of particles in Bantu overall, and the specific distribution of the selected particle groups across the Bantu area. Through this, the paper contributes to our understanding of the nature and variation of particle systems in the world's languages.

On the persistent refusal of English to develop multiple *wh*-correlatives

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Headed relative clauses with relative specifiers are cross-linguistically rare; $\frac{2}{3}$ of IE languages have them, but only 5% of other languages do (de Vries 2002). Headed relatives (CPs modifying NP) and free relatives (CPs with the external distribution of NP) can each have a filled or empty specifier, and a filled or empty head. This gives a partial $2 \times 2 \times 2$ classification of relative clauses which we illustrate in (1) with English forms. Although certain of these possibilities are ungrammatical today, nearly all of them (except ∅-marked free relatives) are attested in the history of English.

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

Belyaev and Haug (2014) show that there is a recurring pathway in the Indo-European languages where asyndetic conditionals with *wh*-indefinites are reanalysed as correlatives, exemplified in (2) from Garrett (2008). Indefinite *wh*-forms in asyndetic conditionals are found in contemporary Russian; correlatives are widely attested in Indo-European, especially modern Indo-Aryan.

(2) [kuiš=an=šan EGIR-pa tarnai] n=an šakuwanzi
WH=him=PTCL back lets PTCL=him they.imprison
'If anyone lets him back, they will imprison him.' →
'Whoever lets him back, they will imprison him.' (Conditional 'backformation' ours.)

The minimal analysis of correlatives is that they are free relatives, left-adjoined to a clause.

Early IE did not have embedded relatives (Clackson 2007); later headed *wh*-relatives descended from structures like (2). However, there is a research problem: different languages have different subsets of the structures that are predicted by the diachronic pathway. For example, Hindi has correlatives (3), multiple correlatives and free relatives (but not multiple free relatives), whereas Old English has free relatives, including left-adjoined free relatives which look like correlatives (4), but no multiple correlatives (or multiple free relatives).

(3) jo laRkii khaRii hai vo lambii hai
REL girl standing is DEM tall is
'The girl who is standing is tall'

(4) Swa hwylc eower swa næfð nane synne on him, awyrpe se ærest ænne
So which you.GEN.PL so NEG.have no sin in him, cast.out.SBJ he first one
stan on hy
stone on her
'He that is without sin among you, let him first cast a stone at her.'

This gives us three questions: [i] If correlatives are free relatives, why do we find multiple correlatives, but not multiple free relatives? [ii] Are examples like (4) correlatives or not, given that English does not have multiple correlatives? [iii] Why does English not have multiple correlatives?

Bhatt (2003) argues that mulitple correlatives are underlyingly IP-adjoined, and that single correlatives are base-generated as adjoined to the correlate pronoun, thereby suggesting that they belong in different classes; we can develop a similar view for English by following Bresnan and Grimshaw's (1978) analysis of free relatives. They argue for a matching analysis of English free relatives, showing that the *wh*-phrase has the distribution of its word-class in the higher clause, as well as satisfying its gap-related function within the relative clause, as in (5)–(6).

(5) a. I'll buy [whatever you want to sell].
b. I'll buy [the turkey].

(6) a. I'll word my letter [however you word yours].
b. I'll word my letter [carefully].

This presents a very simple explanation of why free relatives do not have multiple *wh*-elements: in some sense, through matching, the *wh*-element is both within the free relative and outside it. Inasmuch as it is outside it, it is categorially selected or θ-marked by its head. Multiple *wh*-forms cannot all be selected in this way, within a single constituent. This contrasts with embedded interrogatives, where what is selected is a clause and so in *I wonder [who did what]* the *wh*-word is not directly selected by *wonder*.

Returning to correlatives, an IP-adjoined clause is not selected and so there are no external selectional requirements for it to satisfy. Accordingly, there is no constraint against multiple *wh*-forms within an IP-adjoined clause. This approach suggests that it is quite possible to analyse Hindi correlatives as left-adjoined free relatives. Multiple correlatives are possible because they are not linked to an argument position, the absence of multiple free relatives in argument positions having been independently explained.

If we can explain why there are no multiple correlatives attested in English, then we can analyse the left-adjoined free *wh*-relatives of Old English as correlatives in these terms. Why does (Old) English not have multiple correlatives, built from left-adjoined multiple free *wh*-relatives? Our answer is that there is no stage in the history of English when all the elements necessary are simultaneously present.

OE has *wh*-indefinites and it has conditional structures. Its conditional structures can either be *if*-protasis conditionals, as in (7), or asyndetic V1 conditionals as in (8). The key fact is that in OE *wh*-indefinites do not occur in asyndetic constructions: they occur in *if*-clauses. There are no *wh*-indefinites in the V1 conditionals. The combination of asyndesis and *wh*-pronouns is unattested in OE, so in the absence of the source construction multiple *wh*-correlatives are unattested in OE.

(7) Gif hwa hwæt lytles æniges bigwistes him sylfum gearcode. him scuton sona to
if who what little.GEN any.GEN food.GEN him self prepare him shoot soon to
reaferas.
robbers
'If anyone prepares himself any small amount of food, thieves soon flock to him.'

(8) wylle ðu beswingen, wylle ðu ofslean, wylle ðu adrencean, wylle ðu adydan,
will you beat, will you kill, will you drown, will you put.to.death,
wylle ðu forbærnan, ne beo ic nan oðer.
will you burn, NEG be I none other
'Regardless of whether you beat, kill, drown, kill, or burn [me], I am no other.'

Although later English has asyndetic conditionals it does not have *wh*-indefinites: there are contemporary asyndetic conditionals but they use complex indefinite pronouns as in *anyone touches his car, he hurts them*.

There are two conclusions. First, there is no obstacle to analysing a *wh*-correlative as a *wh*-free relative adjoined to a main clause, as long as you accept that there are restrictions on free relatives which are imposed when they function as arguments. Second, the Belyaev & Haug cycle can only be renewed if all the ingredients are there: they require *wh*-indefinites in asyndetic conditionals.

A definiteness effect with THEME passives in West Flemish?

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This paper deals with passivization strategies in double object languages, with the focus on THEME passivisation in West Flemish (WF), a Dutch dialect. The paper shows the relevance of the interaction of syntax and information structure. It also raises a methodological issue in relation to acceptability judgements, showing in particular how information structure may inadvertently play a role in determining acceptability.

1. The puzzle In standard Dutch, GOAL passives are restricted to so called 'pseudo passives' (Broekhuis & Cornips 2012), in which a special auxiliary *krijgen* ('get') is introduced. In WF, on the other hand, 'regular' GOAL passives are fully productive, with both definite and indefinite GOALS (underscored), where the indefinite subject necessitates *er* insertion (1b).

(1) a. dan al de studenten die medicatie voorengeschreven worden
that-pl all the students that medication prescribed are
b. dan der veel studenten die medicatie voorengeschreven worden
that-pl expl many students that medication prescribed are

On the other hand, at first sight, WF THEME passives display what looks like a definiteness asymmetry. On the one hand, with an indefinite THEME, passivisation of the THEME is fully productive (2a): like all indefinite subjects the indefinite THEME remains in a low position with obligatory insertion of *er*. As can be seen, the finite verb *wordt* ('becomes') agrees with the indefinite THEME. On the other hand, promotion of a definite THEME to subject status in passives is judged unacceptable, regardless of the order of the arguments (2b/b'). In the alternative pattern in which the GOAL is a PP, the definite THEME can be promoted (2c).

(2) a. dat er de studenten een nieuwe medicatie voorgeschreven wordt
that-$_{SG}$ there the students a new medication prescribed is
b. *??dat die nieuwe medicatie de studenten voorgeschreven wordt
that-$_{SG}$ that new medication the students prescribed is
b'. *dat de studenten die nieuwe medicatie voorgeschreven wordt
that-$_{SG}$ the students that new medication prescribed is
c. dat die nieuwe medicatie (aan de studenten) voorgeschreven wordt
that-$_{SG}$ that new medication (to the students prescribed is

The unexpected asymmetry between indefinite and definite THEME promotion calls for an explanation.

2. Rescue strategies for THEME promotion in passives Upon examination of a wider range of data, however, it becomes clear that what initially appeared to be examples of illicit promotion of the definite THEME can be 'rescued' by the insertion of 'middlefield' material, such as, e.g, an adverbial adjunct (*regelmatig* 'regularly'), which has to be inserted to the right of the GOAL (3a-b).

(3) a. dat die medicatie de studenten regelmatig voorgeschreven wordt
that-$_{SG}$ that medication the students regularly prescribed is
b. *dat die medicatie regelmatig de studenten voorgeschreven wordt
that-$_{SG}$ that medication regularly the students prescribed is

If (3a) is analysed as an instantiation of Germanic Object Shift (OS) (Haegeman 1993), with the GOAL nominal *de studenten* ('the students') being evacuated from the VP and moved across the adjunct *regelmatig* ('regularly'), then the contrast in (3a/b) shows that, where acceptable, the promotion of a definite THEME in passivization in fact requires that the GOAL DP itself should undergo object shift (OS) across the adjunct. One might speculate that the presence of the middlefield adjunct somehow contributes in an essential way to the licensing

of the OS of the GOAL nominal, by, for instance, providing some appropriate structural layer facilitating OS. Indeed, as will be shown during the presentation, other middlefield constituents, such as the AGENT *by* phrase, a negative or positive polarity marker, a discourse/focus particle, etc. also serve to rescue the THEME passive, always provided the GOAL has shifted across them.

However, extending the data even further reveals that relating the rescue strategy for definite THEME passives directly to the licensing (or the overt marking) of OS by means of middlefield adjuncts is unsatisfactory. Other rescue strategies for definite THEME passives do not, at least at first sight, interact with OS: (4) illustrates how the promotion of a definite THEME is also rescued by the presence of an extraposed adjunct (4a), when the GOAL argument is negative (4b) or with stress on the lexical verb (4c).

(4) a. dat die medicatie de studenten voorgeschreven wordt in de examens
that-$_{SG}$ that medication the students prescribed is in the exams

b. dat dienen cursus niemand aangeroaden is
that that course no one recommended is

c. dat dienen cursus de studenten OF geroaden is
that that course the students DIS recommended is

3. Information structure The definiteness effect in THEME passives suggested by the contrast between (2a) and (2b) will be reinterpreted in terms of the interaction between syntactic constraints on OS and information structure.

The promotion of the THEME in passive (2b) entails that the THEME/direct object crosses the GOAL/indirect object. As in other such cases, the extraction of the direct object across the indirect object leads to a 'push up' (Haegeman 1993, Broekhuis 2009) effect and requires that the GOAL/indirect object undergo OS (5a vs 5b). THEME promotion in the illicit definite THEME passive (2b) above also gives rise to the 'push up' effect for the GOAL argument, which must evacuate the VP, accounting for the contrast between (3a) and (3b).

(5) a. *Welke medicatie schrijven ze tegenwoordig de studenten voor?
Which medication prescribe they nowadays the students PART

b. Welke medicatie schrijven ze de studenten tegenwoordig voor?
Which medication prescribe they the students nowadays PART

However, it is generally assumed that '[OS] arguments moved out of the VP are interpreted as presupposed' (Holmberg 1999:23). This must mean that, all things being equal, the shifted GOAL nominal *de studenten* ('the students') in (2b) is presupposed. I propose that the net effect then is that there results an imbalance in information structure in that (2b) lacks a (VP internal) focus. Lacking focus, (2b) is 'informationally incomplete' (Erteschik-Shir 2007:187-9). The rescues strategies (3-4) all serve to add a focus.

In the case of the promotion of the indefinite THEME in passivization (2a), the problem does not arise: the indefinite THEME remains VP internally, as is the case for indefinite subject in general. Since it does not cross the goal/indirect object, there is no push up effect and the THEME itself, which is not moved, can constitute a focus. Similarly, the PP goal in (2c) is not affected by 'push up' and can constitute a focus.

I conclude that the degradation associated with the 'definiteness effect' in (2b) is not simply an effect of the narrow syntax. Rather it comes about as the by-product of the interaction of object shift, order preservation and information structure.

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The impersonal gets personal: A new pronoun in Multicultural London English

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1. Introduction: A new pronoun *man* (developed form a generic plural nominal form *man*/*mans*) has emerged in the speech of young speakers of Multicultural London English (MLE; Cheshire 2013). This pronoun has a number of interesting properties, and here I focus on three, i) *man* can have an "optionally inclusive" impersonal interpretation (in the sense of Hoekstra 2010), i.e., when interpreted generically its denotation need not include the speaker in all cases (unlike e.g., Standard English (SE) *one*, or Icelandic *maður*); ii) *man* can have a definite interpretation, in which it can be 1st, 2nd or 3rd person (SG or PL in each case); iii) *man* cannot act as a bound variable. Some examples are given in (1):

(1) a. Impersonal:
   i. Including speaker: *Man's gotta work hard to do well these days.*
   ii. Excluding speaker: *I heard man eats bare* [= lots of] *pasta in Italy*.

   b. Definite:
   i. 1st person: *Before I got arrested man paid for my own ticket to go Jamaica.*
   ii. 2nd person: *Man needs to calm down!* (uttered to a friend who is upset)
   iii. 3rd person: *Man's tryin'a say he's better than me*.

   c. Not a bound variable:
   i. [Every guy]$_i$ loves man$_{*i/\checkmark j}$'s mum.
   ii. Only John thinks man's a great cook $\neq$ Only John (λx(x thinks x is a great cook))
   iii. I did man's homework, and so did Andrew. (*Sloppy reading)

MLE *Man*'s "optionally inclusive" impersonal interpretation makes it strikingly similar to certain other Germanic *man* pronouns (German *man*, Danish *man*, Dutch *men*, a.o.), but there are intriguing differences, most notably in that MLE *man* can have a context dependent 'omnipersonal' definite interpretation. Other *man* pronouns are known to be able to take on a definite interpretation, usually 1SG or 1PL (see, e.g., Sigurðsson and Egerland 2009), but MLE *man* takes on a much broader range of interpretive possibilities: it can be take on any person and number combination.

Previous accounts of the impersonal (generic) interpretation of Germanic *man* pronouns (and impersonal pronouns in general) have often invoked ϕ-feature underspecification coupled with binding by a GEN oerator, either high in the clause (Moltmann 2006, Sigurdsson and Egerland 2009, a.o.), or locally, in the DP (Ackema and Neeleman 2016b). In this talk I will argue that MLE *man* does seem to be lacking in ϕ-feature content, but that it cannot behave as a bound variable in any environment. Therefore, at least for this pronoun, generic interpretation cannot be the result of GEN binding. I propose that the impersonal generic reading and the definite readings of the pronoun are all generated in the same way: an epsilon operator picks out the most salient (potentially plural) member of the person set that is introduced by a person head.

3. A Theory of Person: The theory of person that I adopt to account for *man*'s wide range of possible interpretations is that of Harbour (In Press). Harbour's theory of person eschews a Harley and Ritter style person geometry in favour of a simple bivalent feature approach, where two features [author] and [participant] (with different semantics and combinatorics to classical author and participant features) pick out members of the full person lattice π, which includes the entire ontology of person. Syntactically, a pronoun has at its root a ϕ head which introduces a variable, which is then dominated by a person head π, whose denotation is the

lattice $\mathscr{L}_\pi = \{i_o, iu_o, u_o, o_o\}$ (*i*=speaker, *u*=hearer, *o*=other; i_o indicates all sets including *i*, and any number of, but potentially zero, others; u_o and o_o indicate the same *mutatis mutandis*). The features [author] and [participant] are also lattices, with the denotations $\{i\}$ and $\{i, iu, u\}$ respectively. These features act on π through function application, where $[\![\pi_F]\!] = [\![\mathrm{F}]\!](\mathscr{L}_\pi)$. A positive valence of a feature means that the two lattices undergo a join operation (each member of the feature lattice is added to each member of π), and a negative valence means that they undergo a subtraction operation (each member of the feature lattice is subtracted from each member of π). No features on π at all (a bare person head) mean that the full person ontology is present.

4. Interpreting *man*: I suggest that syntactically, *man* has no features present on the π head, and thus in its basic form denotes the set $\{i_o, iu_o, u_o, o_o\}$, which represents the entire person ontology. This captures that fact that the impersonal interpretation can pick out any generally relevant group from among that set, and does not obligatorily have to include the speaker (u_o and o_o are also present). The definite interpretation is achieved through the projection of a D head above π. This head acts as an epsilon operator (von Heusinger 2004), and introduces a choice function which picks out a contextually salient individual from the set of individuals that the π lattice includes. Since the π lattice of MLE *man* is not constrained (there is no feature specification on π), the choice function can pick out **any** contextually relevant (potentially plural) member of the set, and thus the definite meaning of MLE *man* spans all persons and numbers. Since *man* cannot be bound, the optionally inclusive generic interpretation of *man* could not be generated through binding of the variable introduced at the base of the pronoun: instead, I suggest that the generic reading is generated in the same way as the definite readings. In this case, D picks out a very large plural individual which includes all of those contextually relevant members for which the predicate holds (this could be, e.g., all/most Italian people in the example in 1.a.ii). The fact that *man* cannot act as a bound variable is the result of *man* obligatorily projecting a D head, which binds off the variable introduced lower down in the pronoun, blocking binding from an external source. I do not make the stronger claim that all generic interpretations of impersonal pronouns are generated in this way: indeed, I suggest that a GEN-binding approach appears feasible for some other impersonal pronouns (such as standard English *one*). However, I do claim that the binding approach is not the only way to generate the impersonal reading, and that it should not be taken for granted that it is the right way to analyse generic readings of impersonals cross-linguistically.

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Roots and Paradigms in Gorwaa:
Toward a morphosyntactic description of the Gorwaa noun

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An analysis which identifies noun roots and the paradigms into which they fit in South Cushitic is important for understanding the system of gender/number in South Cushitic. In this talk, I will outline an approach for arriving at the noun roots in the South Cushitic language Gorwaa by 1) establishing the grammatical properties of gender/number in Gorwaa relevant to the morphosyntax; 2) enumerating a list of number suffixes and lexical roots for Gorwaa; and 3) exploring the paradigms into which nouns fit.

Gorwaa (ISO 693-9: gow) is spoken in the East African Rift Valley of central Tanzania by approximately 15,000 people (Mous 2007: 2). Due to small speaker numbers, sudden, rapid urbanization, and what has been described by Muzale and Rugemalira (2008) as a political environment hostile to languages that are not Swahili or English, Gorwaa will face considerable challenges to remain viable into the next century.

Up to the present point, the literature suggests that 'number-derived' forms in South Cushitic are formed from morphologically simpler 'base-forms' (see Mous 1993: 50-74 for Iraqw, and Kießling 2000: 10-11 for South Cushitic in general):

(1) *hapél* (M) 'bats' (as a group) → *hapeelmó* (M) 'bat' (Gorwaa)
→ *hapeelma'* (N) 'bats'
(adapted from Kießling 2000: 11)

In this talk, I depart from this analysis in proposing that I develop an analysis which sees nouns as entering the derivation as roots *unspecified for gender and number* (c.f. Marantz 1997). The process would look something like this:

(2) *hapeel-* √bat → *hapeelmó* (M) 'bat'
→ *hapél* (M) 'bats' (as a group)
→ *hapeelma'* (N) 'bats'

In setting up the argument above, several properties of gender/number in Gorwaa will be argued for with examples, namely: a) that syntactic gender has a basis in biological sex, but that the core of semantically compliant nouns is very small; b) contra typological analyses of South Cushitic (e.g. Corbett 2005: 126-129), Gorwaa possesses 3 major syntactic genders, manifest in agreement patterns; c) the syntactic gender of a noun may change when the noun is changed for number (e.g. in (3) below, *desu* – pl. form of *desi*(F) – triggers the same agreement as *garma*(M), therefore indicating that it, too, is (M) gender); and d) Gorwaa possesses two syntactic number values: singular and plural.

(3) a. *desír tleer i qwala/amís*
girl.LF tall.F Aux make.happy.F.Pres
'a tall girl makes one happy'
b. *desú tlét i* ***qwala/amiis***
girls.LF tall.M.Pl Aux **make.happy.M.Pres**
'tall girls make one happy'
c. *garmá tleér i* ***qwala/amiis***
boy.LF tall.M.Sg Aux **make.happy.M.Pres**
'a tall boy makes one happy'

Following an exhibition of the number suffixes of Gorwaa, attention can then turn to the process of proposing roots. Through suffix-stripping, as well as taking suprasegmental operations into account, it will be shown how roots may be identified. Evidence from deverbal nouns will be presented to show that the roots proposed are plausible. For example, the verb *fiis* 'to steal' + *-oo* → *fiisoo*(F) 'stealing' – by analogy, the nouns *mar'oo*(F) 'caves', *gitsoo*(F) 'grasses', and *qan'oo*(F) 'eggs' can be parsed in the same way, yielding *mar'*- √cave, *gits*- √grass, and *qan'*- √egg. Finally, zero-marked nouns will be examined, and a mechanism proposed in which they are valued for gender.

The talk will conclude with a review of the list of paradigms into which nouns fit, based on which suffixes taken by their roots, highlighting similarities in semantic and phonological shape.

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Discourse Topicality in the Languages of Northern Sarawak

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This paper analyses differences in discourse topicality in the voice systems of three closely-related languages of Northern Sarawak: Lun Bawang, Kelabit and Sa'ban. Like other Western Austronesian languages, they have systems of symmetrical voice alternations – or alternations in verbal morphology that indicate different mappings of arguments to functions but do not affect syntactic transitivity. This can be illustrated from Sa'ban in (1):

(1) a. **Sa'ban Actor Voice (AV)**

Yuet	noknai	n-toe	éek.
monkey	this	AV-drop	1SG

'This monkey drops me.'

b. **Sa'ban Undergoer Voice (UV)**

Yuet	noknai	i-toe	éek.
monkey	this	UV-drop	1SG

'I dropped the monkey.' (Clayre 2014: 138)

In AV, the actor is mapped to subject and the undergoer to object. In UV, the mappings are reversed and the undergoer is mapped to subject, actor to object. Both clauses are transitive with two core arguments expressed as NPs.

Though the three voice systems share the property of being symmetrical, they differ in other ways. The Kelabit and Lun Bawang voice systems appear to preserve more conservative features, such as an instrumental voice where the instrument is mapped to subject:

(2) a. **Kelabit Actor Voice**

La'ih	sineh	ne-nekul	nuba'	nedih	ngen	seduk.
man	DEM	PFV-AV.spoon.up	rice	3SG.POSS	with	spoon

'That man spooned up his rice with a spoon.'

b. **Kelabit Undergoer Voice**

Sikul	lai'h	sineh	nuba'	nedih	ngen	seduk.
UV.PFV.spoon.up	man	DEM	rice	3SG.POSS	with	spoon

'That man ate his rice with a spoon.'

c. **Kelabit Instrumental Voice**

Seduk	pe-nekul	la'ih	sineh	nuba'	nedih.
spoon	IV-spoon up	man	DEM	rice	3SG.POSS

'That man used a spoon to spoon up his rice.'

Moreover, Lun Bawang, unlike Kelabit, preserves the use of oblique forms for pronominal AV undergoers known from the Philippines (Reid and Liao 2004). Hence, Lun Bawang can be seen as the most conservative, Sa'ban as the most innovative and Kelabit as in-between in terms of morphosyntax (Clayre 2005, 2014).

Symmetrical voice systems are relatively rare cross-linguistically and differ from active-passive and ergative-antipassive voice systems in that they have multiple transitive clauses. As a result, Western Austronesian languages have been subject to considerable debate over their alignment and whether one of the transitive clauses (AV or UV) is more basic than the other (Kroeger 1993). It has also been proposed that Western Austronesian languages differ in their alignment and have shifted from ergative in the more conservative languages to accusative in the more innovative languages (Aldridge 2011). This paper enters into the alignment debate, and explores if there is evidence for differences in alignment that correspond to differences in morphosyntax, by comparing AV and UV in Lun Bawang, Kelabit and Sa'ban.

As the three languages have multiple (syntactically) transitive clauses, identifying alignment depends on identifying if there are any semantic and/or discourse arguments for treating either AV or UV as more basic than the other (Kroeger 1993). Givón (1983) argues that transitivity can also be defined in discourse terms. A proto-typical transitive clause has an actor that is highly topical and an undergoer that is also relatively topical, though less so than the actor. He proposes the measures of referential distance (number of clauses to previous mention) and topical persistence (number of consecutive clauses in which the referent remains topical) to quantify discourse topicality. These measures are applied to traditional narratives in Lun Bawang, Kelabit and Sa'ban to see a) if there are any differences between AV and UV that support an ergative or accusative account of alignment and b) if the languages differ in this respect. The results suggest that both AV and UV have the topicality patterns expected of a transitive clause in Kelabit and Sa'ban, whilst in Lun Bawang the undergoer of a UV clause is discourse topical most of the time, whilst the undergoer of an AV clause is low in discourse topicality roughly 50% of the time. This suggests that UV may be more basic than AV.

These findings have several important implications. Firstly, they support the idea that voices can be morphosyntactically symmetrical and nonetheless differ in their transitivity at a discourse level. This in turn suggests that symmetrical voice languages may differ in their alignment. Finally, that UV appears more basic in Lun Bawang, whilst the voices are discourse symmetrical in Kelabit and Sa'ban also supports the idea of alignment shift from more ergative to more accusative via changes in the discourse topicality patterns of AV and UV.

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"People widnae understand that, wint they no?": *–int* in Glasgow Scots

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At least since Brown & Millar (1980), literature on Scots varieties has observed that while the standard negation marker in Scots is *–na(e)*, as in (1), this cannot be used in constructions with interrogative syntax (2). Instead, constructions like (3) and (4), in which negation remains below the subject, are produced.

1. He isnae coming.
2. *Isnae he coming?
3. Is he no coming?
4. He's coming, is he no? (Scots, Brown & Millar 1980)

However, it is interesting to note that in various Scots dialects, particles have been innovated that can be used in subsets of *non-canonical interrogatives*: biased questions, tag questions, rhetorical questions and exclamatives. In standard English, these constructions share the properties of interrogative syntax and some marker of negation – generally, the reduced form *–n't* (see Domaneschi et al. 2017 on choice of negative form in biased questions like (5)).

5. Isn't she coming too? BIASED QUESTION
6. She's coming, isn't she? TAG QUESTION
7. Didn't I tell you it would be easy? RHETORICAL QUESTION
8. Isn't it a lovely day! EXCLAMATIVE

Tag questions like (6) are usually taken to be VP-elided forms of matrix biased questions like (5) (e.g. Sailor 2011).

In this talk, I will focus on the Glasgow Scots particle *–int*, which appears in a limited set of the contexts outlined in (5-8). *–int* combines with the onset of the relevant auxiliary, and, according to the literature, is available in "tag questions and exclamatives" (Thoms et al. 2013). I will present the results of grammaticality judgment tasks which explore this distribution further, and show that speakers also accept *–int* in polar rhetorical questions (7) and in tags on negative anchors when combined with a lower *no* (8).

5. He likes it, **dint** he?
6. **Hint** she got an amazing wee voice!

(Glasgow, Thoms et al. 2013)

7. **Dint** I tell you it would be easy?!
8. People widnae understand that, **wint** they **no**? (Glasgow)

Furthermore, *–int* in tag questions (both as in (6) and (8)) is significantly preferred ($p < .001$) when there is no negative evidence challenging the speaker's belief of *p* – where standard English would use a tag question with falling intonation (e.g. Ladd 1981) – as opposed to contexts where there is negative counterevidence.

–int is not accepted by speakers in any other contexts, including matrix biased questions or any form of *wh*-question. This provides a challenge to any analysis that suggests that *–int* is either a form of true negation or a specific phonological form representing biased question negation (e.g. FALSUM (Romero 2015)).

I therefore posit an analysis for *–int* as a Call on Addressee marker (Beyssade & Marandin 2006). Specifically, I take *–int* to signal a *check* discourse move. Unlike *questioning* or *confirming*, I suggest a check move does not involve the introduction of a $\{p, \neg p\}$ partition to the Table (Farkas & Bruce 2010), and thus does not pass any responsibility for the addition of *p* to the Common Ground (CG) to the addressee. Instead, a check move requests that the addressee check that *p* is *already* part of CG (whether through a previous overt addition, or as part of the addressee's own discourse commitments). I analyse this syntactically in the neo-performative framework established by Wiltschko (in press), with *–int* situated in the head of the ResponseP at the edge of the left periphery. ResponseP also hosts other discourse particles and invariant tags, such as *right* and *huh*, and externally merges the Addressee in the specifier position. Movement of the auxiliary occurs due to the Stranded Affix Hypothesis (Lasnik 1981), with the stranded affix originating due to the reanalysis of biased question negation as *–int* in this Response position.

9. $[_{\text{RespSUBJ}}$ Adr $[_{\text{Resp}}$ $h_i$int $[_{\text{CP}}$ $[_{\text{TP}}$ she $[_{\text{T}}$ t_i $[_{\text{vP}}$ got an amazing voice]]]]]]
10. He likes it $[_{\text{RespSUBJ}}$ Adr $[_{\text{Resp}}$ $d_i$int $[_{\text{CP}}$ $[_{\text{TP}}$ he $[_{\text{T}}$ t_i $[_{\text{vP}}$ ~~like it~~]]]]]]
11. People widnae understand it $[_{\text{RespSUBJ}}$ Adr $[_{\text{Resp}}$ $w_i$int $[_{\text{CP}}$ $[_{\text{TP}}$ they $[_{\text{T}}$ t_i $[_{\text{NegP}}$ no $[_{\text{vP}}$ ~~understand it~~]]]]]]]

This analysis of *–int* accounts for its specific distribution in these apparently interrogative constructions where the answer to the speaker's 'question' is taken to be uncontroversial and presumed to be shared by the addressee.

It also accounts for the presence of *no* in the tag question on the negative anchor: because *–int* introduces a check move, it is essential that there is negation within the tag, mirroring the negation in the anchor, to be checked. Without the lower negation, the speaker would then be checking that a proposition of the opposite polarity to the anchor, and therefore to their belief, was already in CG.

I will extend this check move analysis to similar phenomena in Newcastle English (*–n't*) and Tyrone English (*–n'tn*), arguing that there is a situation of microvariation between these varieties that have grammaticalised a particle for the checking function, and other English varieties, which have not.

12. She can't come, ca**n't** she not? (Newcastle, Beal 1993)
13. She won't come, wo**n'tn** she not? (Tyrone, Warren Maguire p.c.)

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Using the hands to represent the locations of objects: Gesture as a substrate for signed language acquisition.

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An ongoing issue of interest in second language research concerns what transfers from the speaker's first language to their second. For learners of a sign language, gesture is a potential substrate for transfer. A previous study by Marshall & Morgan (2015) revealed that adult hearing learners of British Sign Language made many errors when selecting the correct handshapes to represent objects ("entity classifier handshapes") in an elicitation task requiring them to express the relative locations of objects. Their problems may have stemmed from starting out with only a limited repertoire of handshapes in their gesture, or, alternatively, from having too broad a repertoire. The current study tests these two hypotheses on sign-naïve hearing adults: (1) hearing adults have in their gesture only a limited repertoire of handshapes, and when learning to sign, they must learn that different configurations of the hand can be used to represent different objects; (2) hearing adults have a substantial repertoire of handshapes at their disposal, and one key challenge is in narrowing down to the appropriate, conventionalised, handshapes for that language. If the first option is correct, we would predict that participants use only a limited set of handshapes as they complete the task. They might make few attempts to create handshapes to represent objects at all, and rely instead on pointing and whole-body enactments as they attempt to convey locative and distributional information about the objects. If the second alternative is nearer the mark, we should see evidence of creativity with respect to handshapes used to represent objects, which will manifest not only as participants employing a wide range of handshapes but also a degree of variation between and within participants.

30 sign-naïve hearing adults (12 male, 18 female) with a mean age of 32 years (SD 14; range 19 – 62) participated. Criteria for inclusion were that they had never learned a signed language, were native speakers of English and reported no neurocognitive impairments. They were tested on Marshall & Morgans' task, in which, after being presented with two pictures in succession, they had to describe what had changed, using just their hands, with no speech. Each picture featured two or more objects, whose location or orientation, or both, had changed in the second picture. The results supported hypothesis 2. Gesturers were inconsistent in the handshapes they used to represent the same objects across trials, and all produced some handshapes that were different to those used by native signers and BSL learners, employing a near superset of handshapes produced by these previously-tested groups. A key challenge then when learning to express locative relations appears to include reducing from a very large set rather than supplementing a restricted one. Our results go beyond offering a first insight into the broad range of gestures that sign-naïve gesturers have at their disposal when attempting to represent objects in space. Having detailed knowledge of what learners start out with in terms of their gestural inventories allows us to identify contenders for both negative and positive transfer. When asked to reproduce signs that resemble co-speech gestures, non-signers bring their gestural knowledge to bear on the task, the result of which can be a less accurately produced sign (see Chen Pichler & Koulidobrova, 2016). Conversely, Taub, Galvan, Piñar & Mather (2008) have identified aspects of some sign novices' gestures, such as a natural ability to produce handshapes that closely resemble classifiers, which correlate positively with their later ability to engage in third-person discourse in ASL. Thus, by providing an intricate illustration of gesturers' potential toolkit, this study enables us to establish further connections between

what a learner produces when acquiring sign and the source from which the production first stemmed.

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Clausal complements of factive verbs as DPs in Jordanian Arabic

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This study investigates impossibility of extraction out of clausal complements of factive verbs (CCFV) in Jordanian Arabic (JA). It argues that such complements are CPs, embedded under a null D°, something that turns such clauses into strong islands in JA. This paper thus, on the one hand, adds empirical evidence in favour of the DP analysis of CCFV (originally advanced in Kiparsky & Kiparsky 1970). It challenges, on the other, several recent proposals that argue either that CCFV instantiates an impoverished left periphery (Haegeman 2006; de Cuba 2007) or that there is an operator (in the left periphery of such complements) that blocks extraction to the matrix clause (cf. Melvold 1991, Hegarty 1992, Zubizaretta 2001, and Haegeman 2012). To illustrate, consider the following JA sentence, which contains several factive predicates.

(1) ʔabuu-i ħizin/ nasa/ ʕirif ʔinn-uh ʔaχoo-i sarag s-sijjarah
father-my regretted/forgot/knew that-3SM brother-my stole.3SM DEF-car
ʔimbaariħ
yesterday
'My father regretted/forgot/knew that my brother had stolen the car yesterday.'

Had any element of the CCFV in (1) been extracted to the matrix clause (e.g. questioned), the resulting sentence would be sharply ungrammatical, as evidenced in (2):

(2) *miin/ween ʔabuu-i ħizin/ nasa/ʕirif ʔinn-uh sarag
who/when father-my regretted/forgot/knew that-3SM stole.3SM
DEF-car
s-sijjarah
Intended: 'Who/when did my father regret/forget/know stole the car?'

Ill-formedness of example (2) is straightforwardly accounted for assuming that the relevant CCFV is embedded under a DP which is widely assumed as an absolute island for extraction in Arabic grammar, and hence impervious to movement (Mohammad 1989, 1999; Soltan 2007). Note here that under the operator approach to CCFV, the extracted elements in (2) are said to have an impoverished featural content in comparison to the operator situated in the left periphery of CCFV (Haegeman 2012). This account is rejected here because the resulting question would remain ungrammatical, even if the extracted wh-word has a richer featural content such as D(iscourse)-linked wh-expressions (e.g. *which man*?), typical examples of richly-featured elements (ibid):

(3) *miin z-zalamih ʔabuu-i ħizin/ nasa/ʕirif ʔinn-uh
which DEF-man father-my regretted/forgot/knew that-3SM
sarag s-sijjarah
stole.3SM DEF-car
Intended: 'Which man did my father regret/forget/know stole the car?'

Ungrammaticality of sentence (3) gives substance to the Kiparskian stance that the asymmetry between factive and non-factive complements lies in subcategorization of the matrix verb. A factive predicate sub-categorizes for, with update terminology, a DP with a silent noun and determiner, giving rise to the islands effects (see, Manahlot 1977; Ouhalla 2005 for similar proposals to Amharic).

What also provides evidence in favour of this line of analysis is the fact that movement to the left periphery of the CCFV is obviously not disallowed in JA, an observation that is hard to account for under the two approaches: the operator-based approach (cf. e.g. Haegeman 2012) or a reduced left periphery approach to CCFV (Haegeman 2006; de Cuba 2007). Consider the following sentences:

(4) ʔabuu-i ħizin/ nasa/ ʕirif ʔinn-ha s-sijjarah ʔaχoo-i
father-my regretted/forgot/knew that-3SF DEF-car brother-my
stole.3SM-it
sarag-ha
≈ 'My father regretted/forgot/knew that the car my brother stole it.'

(5) ʔabuu-i ħizin/ nasa/ ʕirif ʔinn-ha SIJJARAH ʔaχoo-i
father-my regretted/forgot/knew that-3SF car brother-my
sarag
stole.3SM
≈ 'My father regretted/forgot/knew that it was a car that my brother stole.'

Sentence (4) includes an instance of object topicalization, whereas (5) includes an instance of object focalization within the factive complement. For the sake of demonstration, let's consider sentence (5) (as one might object that (4) is a subcase of CLLD, not generated by movement, while focalization is a ubiquitous example of A-bar movement in Arabic grammar (see, Ouhalla 1994, 1997, and Aoun et al 2010, among others)). The FOCUS+ed element *sijjarah* moves to the left periphery (i.e. to Spec, of Focus Phrase; cf. Rizzi 1997), and the sentence remains grammatical. The FOCUS+ed element *sijjarah* forms a chain with the clause-internal gap, which is subject to the usual condition on (movement) chains (Ouhalla 1997: 14). This fact distinguishes JA from other languages such as English and Japanese, whereby movement to the left periphery of CCFV is prohibited:

(6) a. *John regrets that this book Mary read. (Grimshaw 1990: 3).
b. *John-wa [kono hon-*wa/o Mary-ga yonda no]-o
John-top this book-top/act Mary-nom read COMP-act
kookaisiteiru
regret
'John regrets that this book, Mary read.' (Japanese; Maki et al 1999: 9]).

In order to account for the ungrammaticality of the sentences in (6), Haegeman (2012) assumes that there is a clause-typing operator in the left periphery of factive complements, which accounts for the ban against argument fronting in such clauses. This assumption cannot carry over to JA CCFV as movement to the left periphery in this type of clauses is allowed, as evidenced above. If the DP-approach to the factive complements is adopted instead for JA, sentences (4,5) are readily accounted for, i.e. the DP layer that dominates the CP factive complement has no syntactic effects whatsoever on A'-movement within these clauses, something that gives rise to the possibility of fronting inside such complements.

In this light, JA CCFV casts doubt of the operator approach to factive complements insofar as its effects are altogether absent in JA grammar (and obviously in Arabic grammar). It is worth mentioning that even the proponents of this approach have divergent views about the nature of this operator; an iota operator for Melvold (1991), an assertion operator for Starke (2004), and a TP-internal clause-typing operator for Haegeman and Ürögdi (2010). What I propose here is that CCFVs in all languages are either weak islands (as the case in English) or strong islands as the case in JA. Haegeman (2012) herself shows that intervention effects caused by the operator can be overcome by D-linked elements. This implies that weak islandhood is not only related to the type of the extracted element (argumental vs. adverbial) (see, Szabolcsi and Zwarts 1997), but also tied to the featural content of such elements. Other observations associated with factive complements do not need to follow from the same factors behind extraction or lack thereof. See, e.g. Schueler (2016) for a new account of why the complementizer introducing factive complements cannot be dropped without making resort to any argument building on there being an operator in the left periphery of CCVF.

Negative Preposing in root and non-root clauses in English and Spanish

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1. Goal. This talk explores the grammatical restrictions that a specific type of focus fronting, namely Negative Preposing (NPr), seems to impose on the root vs. non-root contexts in which it can occur. Specifically, the analysis is concerned with embedding under factive and non-factive verbs (*sensu* Hooper & Thompson 1973, hereafter H&T). NPr in root contexts is illustrated in (1a) for argument fronting and (1b) for adjunct fronting. In both cases NPr triggers subject inversion:

(1) a. A ningún compañero pudo María recurrir en busca de ayuda.
'To no colleague could Mary turn in search of help.'
b. Nunca antes ha podido María recurrir a ningún compañero en busca de ayuda.
'Never before has Mary been able to turn to a colleague in search of help.'

It has been traditionally acknowledged that languages such as English show restrictions with respect to the root/non-root contexts which permit focus fronting, including NPr (Emonds 2004; Hooper & Thompson 1973; Haegeman 2012; a.o.). In this paper I discuss the reasons why NPr is/is not licensed in both root and non-root contexts in Spanish and English.

2 Background and research question. Frascarelli (2010) argues that the [+foc] feature is only located in root clauses and a distinction should be assumed between root and non-root C-domains (cf. also Haegeman 2002; Jiménez-Fernández & Camacho-Taboada 2013). Nevertheless, languages like Sicilian, Hungarian and Basque show that (some type of) contrastive focus is allowed in embedded contexts (cf. Cruschina 2006, Ortiz de Urbina 1999). Negative Preposing is described as a subtype of focus which involves negative polarity (Haegeman 2012; Emonds 2004; but see Escandell & Leonetti 2014), triggers movement to the CP-area and constitutes a type of Main Clause Phenomena, being thereby restricted to root clauses or embedded clauses with root properties. I illustrate this constraint with data from English, in the contrast (2-3):

(2) a. To no other colleague could he turn to. (Radford 2009)
b. I found out that never before had he had to borrow money. (H&T 119)
(3) a. *He was surprised that never in my life had I seen a hippopotamus. (H&T 479)
b. *John regretted that never had he seen *Gone with the Wind*. (Authier 1992: 334)

This raises the interesting question of whether NP is uniformly constrained to those embedded clauses selected by non-factive verbs across languages. As part of the answer to this question, there is a puzzling effect in languages such as Spanish, where focus fronting in general seems to allowed in all embedding contexts, regardless of factivity:

(4) Negaron que *a Jimena* vieran en la fiesta. (Jiménez-Fernández & Camacho 2014)
'They denied that they saw Jimena at the party.'

NPr is predicted then to be compatible with all types of verbs, factive and non-factive. This prediction is borne out in light of examples in (5), equivalent to the English sentences in (3):

(5) a. Se sorprendió que nunca en mi vida hubiera visto yo un hipopótamo.
'He was surprised that never in my life had I seen a hippopotamus.'
b. Juan lamenta que nunca haya visto María "Lo que el viento se llevó".
'John regrets that never in her life has Mary seen *Gone with the Wind*.'

The contrast between NPr in English and Spanish is even more intriguing in light of semantic approaches such as Frascarelli (2010), according to which focus is licensed only in clauses endowed with illocutionary force. If this semantic characterization of root phenomena is

correct, it predicts that in both English and Spanish factive clauses block NPr. Given the Spanish data in (5), this prediction is not supported by facts.

3 Working hypothesis and methodology. In order to solve the aforementioned puzzle, my working hypothesis is that Spanish NPr is more flexible because the syntactic position targeted by the preposed constituent is lower than the position used in other languages such as English. Methodologically, I have carried out an experiment in which a *systematic comparison* is made of equivalent sentences in English and Spanish, based on the grammaticality judgement of native speakers. The results from the two tests confirm that factivity constrains NPr in English embedding whereas in Spanish it does not stand up as a discriminating factor. The sentences to be judged include preposing of arguments and adjuncts so as to test whether there is any asymmetry between the two types.

4. Analysis. Adopting the intervention account of Haegeman and Ürögdi's (2010) and Haegeman (2012), according to which a factive (or event) operator moving to Spec-CP intervenes with other types of movement, I account for the variation in the distribution of NPr across English and Spanish by the options made possible by feature inheritance of discourse features (Jiménez-Fernández 2010; Jiménez–Fernández & Miyagawa 2014). In English discourse features remain in C, while in Spanish they are transmitted to T. As far as NPr is concerned, in Spanish the focus feature (δ) may be inherited by T from C, so that NP targets Spec-TP, as in (6). This movement does not compete with the operator that has moved to Spec-CP, so no intervention effect arises.

(6) $[_{CP}\ OP_i\ \ C_{event+\delta}\ [_{FP}\ \ t_i\ [_{TP}\ FOC_j\ \ T_\delta\ [_{vP}\ DP\ \ v{+}V\ \ DP_j]]]]$

In contrast, the focus feature stays at C in English, so that NPr competes with the operator movement to CP for the target position, as in (7).

(7) $[_{CP}\ OP_i\ C_{event+\delta}\ \ldots\ [_{FP}\ t_i\ [_{TP}\ T\ [_{vP}\ DP\ v{+}V\ \ DP]]]]$

This competition triggers an intervention effect in the syntax of sentential complements of factive verbs where operator movement has occurred. What is common to English and Spanish is that in non-factive embedded clauses NPr is allowed, given that there is no factive operator blocking NPr. However, again the two languages differ in that in English NPr targets Spec-CP to satisfy the focus feature in C (8), whereas in Spanish NPr undergoes movement to Spec-TP after lowering of the focus feature onto T (9). Thus my working hypothesis is validated.

(8) $[_{CP}\ FOC_i\ \ C_\delta\ [_{TP}\ T\ [_{vP}\ DP\ \ v{+}V\ \ DP_i]]]$

(9) $[_{CP}\ C_\delta\ \ [_{TP}\ FOC_j\ \ T_\delta\ [_{vP}\ DP\ \ v{+}V\ \ DP_j]]]$

Evidence for positing that NPr involves movement to spec-TP in Spanish comes from Binding effects. Spec-TP is an A-position which creates a new binding configuration, as supported by the bound reading in *A ninguna de las crías les daba su propia madre de comer* 'None of the offsprings were fed by their own mother.'

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Toward the copular status of Chinese clefts----Evidence from diachronic syntax

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Data This paper develops a substantive link between three independent and chronologically separate diachronic patterns in Classical Chinese. In each development, a newly copularized (reanalyzed from lexical sources) morpheme occurs in both a copular clause and a cleft. The three parallel diachronic patterns are shown in the following diagram and exemplified in (1-3). (a)-examples illustrate copular uses (modals, negation and adverbs precede verbal heads in Classical Chinese), and (b)-examples illustrate clefts.

Copula morpheme	Grammatical Change Pathway
Wei	Emergence (reanalysis) of copula & cleft (1300~1050 BC) → (Copula & cleft) Simultaneous decline in Classical Chinese (600~400 BC)
Shi	Emergence of copula & cleft (~500 AD) → (Copula & cleft) Simultaneous decline in modern Cantonese & Hakka (18th century AD)
Xi	Emergence of copula & cleft (~1100 AD) → (Copula & cleft) Simultaneous decline in modern Mandarin (18th century AD)

(1) a. Ya bin qi wei chen.
Noble Bin FUT COP minister
"The Noble Bin will be the minister."
(*Collections of Oracle Bones*, 13th - 11th century BC)

b. Wei di ta wo nian
COP god curse my harvest
"It is god who puts a curse on my crop."
(*Collections of Oracle Bones*)

(2) a. Yizhou yuan bu shi yongren.
Yizhou originally NEG COP mediocre.person
"Yizhou was originally not a mediocre person."
(*Lectures on the Vimalakirti Sutra*, 8th century AD)

b. Fei shi du shinai you zhenru ye.
NEG COP deliverance start have dharma PRT
"It is not (via) deliverance that one obtains dharma."
(*Lec. on the Vimalakirti Sutra*)

(3) a. Ci yi bu xi hongwu jiuzhi.
This also NEG COP hongwu old.rule
"This was also not the Hongwu reign's old rule."
(*Collections by Yu Qian*, 1457-1510 AD)

b. Xi ningxia zongbingguan chuzhi.
COP ningxia head.officer in.charge
"It is the Ningxia officer who took charge."
(*Collections by Yu Qian*)

All the three copula morphemes underwent independent decline processes: *Wei* disappeared from copular clauses and clefts by 6 - 4th century BC. *Shi*'s functions in copular clauses and clefts are retained in modern Mandarin yet lost in Cantonese and Hakka (all descendants of Classical Chinese). *Xi* exhibits the opposite pattern: Productive uses in copular clauses and clefts remain in modern Cantonese/Hakka but not in Mandarin. Individual emergence and decline processes are independently observed in previous case studies (Yue-Hashimoto 1969; Peyraube & Wiebusch 1994; Pulleyblank 1995; Bisang 1998; Tang 2009; Meisterernst 2010). The novel observation in this paper is that these three similar processes form a recurring pathway.

The copular approach to Chinese clefts The copular approach to Chinese clefts posits that clefts are underlyingly copular structures. One proposal, by Li & Thompson (1989), proposes that the subject of the copula verb is occupied by a headless relative taking a covert definiteness determiner that extraposes to the right of the focused phrase at surface syntax (cf. Percus 1997). An implementation of (4) is in (5):

(4) Shi Zhangsan yao lai. [modern Mandarin]
COP Zhangsan will come
"It is Zhangsan that will come."

(5) [DEF e_i] *shi* [*Zhangsan*] [null head + *yao lai*]$_i$

Another proposal, by Hole (2011), proposes that, in clefts, the copula verb takes a small clause (CP) argument. The focused phrase moves to [Spec, CP] of the small clause, and predicate abstraction applies to the CP predicate. The C^0 head functions as a special definite determiner, deriving a maximal event reading of the CP predicate.

(6) [$_{VP}$ *shi* [$_{CP}$ [$_{Spec}$ *Zhangsan*$_i$] [$_{C'}$ C^0 [+def] [$_{TP}$ *t*$_i$ [$_{VP}$ *yao lai*]]]]]

The focus movement approach to Chinese clefts Under a focus movement approach, Chinese clefts are not headed by a copula verb. Rather, the copula moves to the left periphery with the focused phrase (Teng 1979, Huang 1982, Zhu 1996). Specifically, assuming a Rizzi-style articulated CP, it is argued that the focused phrase undergoes focus movement to [Spec, FocP]

from its base position at FinP to check the [exhaustive] feature. Subsequently, the copula morpheme in FinP undergoes remnant movement to a projection structurally higher than FocP (e.g. TopP, cf. Kiss 1998, Meinunger 1998, Frascarelli & Ramaglia 2014). A focus-based implementation of (4) is as follows.

(7) $[_{\text{TopP}}$ *shi*$_k$ $[_{\text{FocP}}$ *Zhangsan*$_i$ $[_{\text{Foc'}}$ Foc^0 $[_{\text{FinP}}$ e_k e_i *yao lai*]]]]

Evidence for a copular approach I argue that the recurring pathway identified in Classical Chinese receives a straightforward explanation under a copular approach to clefts. Specifically, after reanalysis of a lexical item into a copula takes place, learners acquire the newly copularized item as an element of copula verbs within their lexicon. Assuming that lexical insertion is triggered, such that the new element is inserted to the copula verb head position in the syntax, we would expect that the same copula element occurs in all constructions that host a copula verb projection. This includes the cleft construction, which is a copular clause construction within learners' grammar, according to the copular approach. In other words, the recurring diachronic pathway is reduced to a reanalysis-and-extension process (Harris & Campbell 1995): the reanalysis of a morpheme as instantiating a copula verb category results in the extension of this morpheme to structures that host the copula verb category. The copular approach also readily accounts for the coordinated decline pattern witnessed in the three morphemes *wei*, *shi* and *xi*: it follows from the homogeneity of copular and cleft structures that the loss of productivity of a given copula verb predicts that it will cease to be used in both copular clauses and clefts.

Problems for a focus movement approach One issue encountered by a focus-based approach is the lack of clear motivations for why copula morphemes demonstrate a recurring trend of moving to a projection higher than FocP (except for the need to derive the correct word order). A more severe difficulty is that the focus approach fails to account for the simultaneous decline of the copular and cleft use. Such analysis would commit to positing two homophonous lexical entries for the copula morpheme that occurs in copular clauses and in clefts, respectively. A direct consequence is the absence of convincing reasons why both lexical entries' loss should be closely correlated.

Semantic evidence Several recent semantic proposals that derive the exhaustive reading of clefts based on a copular syntax (without focus movement) are applicable in Chinese. Büring & Križ (2013) assume with a copular approach that the cleft structure contains a definite operator. Crucially, the definite description projects a conditional presupposition (8a). Accordingly, an exhaustive reading is derived for (4), as I show in (8b). This semantics is in principle compatible with both the Li & Thompson/Percus syntax and the Hole-syntax.

(8) a. A structure of the form [COP a P] b. Given the structure [*shi* [*Zhangsan*] [*yao lai*]]

Asserts: ⟦ P⟧ (⟦ a⟧) Asserts: ⟦will come⟧ (⟦ Zhangsan⟧)

Presupposes: ⟦a⟧ not a proper part of ⟦P⟧. Presupposes: ⟦Zhangsan⟧ not a proper part of ⟦will come⟧.

If the situation includes more than one individual who will come (e.g. Zhangsan and Lisi), ⟦ Zhangsan⟧ will be a proper part of ⟦ will come⟧ , falsifying the presupposition. If no individuals will come in the situation, the presupposition is satisfied, but the at-issue semantic content (i.e. what is asserted) will be false. Thus, the only way to satisfy both the presupposition and the assertion is for Zhangsan to be the maximal (only) individual who will come, hence an exhaustive reading.

Structural Evidence Syntactically, focus movement predicts island sensitivity. This prediction is *not* borne out by the following constructed Complex NP island example in Chinese (based on three Northern Mandarin speakers I consulted):

(9) Shi [na-pian lunwen]$_i$ ta xiangxin you [ken jieshou e_i] de pingwei.
COP [that-CLF paper]$_i$ he believe have willing.to accept e_i REL reviewer
"It is [that paper]$_i$ that he believes there will be reviewers [who are willing to accept e_i]."

The circumvention of island effects might be due to the availability of empty pronominals within Chinese complex NPs (Lin 2005; Li 2007), suggesting that (9) does not involve a movement-created operator-variable binding relation. This finding is compatible with a copular analysis that posits no focus movement, and confirms the diachronic data.

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THE STATUS OF PASSIVE CONSTRUCTIONS IN OLD ENGLISH

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In Old English, passive-type constructions involving a copula and a passive participle were used to express both events and states. The copulas used in these constructions are *weorðan* 'become' and *wesan/beon* 'be'. The relationship of the meaning of the copulas to that of the construction as a whole has been disputed. Early studies identified the 'become' constructions with eventive meaning and the 'be' constructions with stative meaning, but the evidence militates against this and in particular attests to the frequent use of 'be' constructions with eventive meaning (see Mitchell 1985: I, 324–33). Recent work has acknowledged the possibility of a compositional analysis for these constructions but has not addressed the semantic and distributional differences between the two types of copula (e.g. Mailhammer & Smirnova 2013). Related to the compositionality of these constructions is the issue of grammaticalization; some authors have suggested that these constructions were coming to be reanalysed as a unitary expression of voice alone (see Denison 1993: 423), but the criteria suggested for testing this (e.g. participial inflection, overt agents) are often problematic. We propose a semantic model that represents these constructions compositionally and we test it against a selected corpus of Old English texts. Our analysis suggests that the attested Old English passives are fully compatible with a compositional analysis; we also discuss additional semantic factors that may be responsible for the lower frequency of passives with *weorðan*.

In order to identify passives for analysis, we made use of the York-Toronto-Helsinki Corpus of Old English Prose. A selected subset of this corpus was used for automated querying to identify potentially relevant forms; these were then reviewed manually within their original context to ensure that their semantic properties had been accurately identified. Translated texts were also compared to their Latin originals, in order to provide additional information to resolve potential ambiguities about the Aktionsart of Old English forms.

Our semantic model is based on the Aktionsart (lexical aspect) of the copular verb and of the passive participle. We classify *weorðan*, *wesan/beon*, and passive participles in terms of transitions: *weorðan* has transitional Aktionart and *wesan/beon* has non-transitional Aktionsart. The passive participles of non-transitional verbs such as *cunnan* ('know') are always non-transitional ('known'), while the passive participle of transitional verbs such as *don* ('do') may be non-transitional, as in '(having been) done', or transitional, as in '(being) done'. The Aktionsart of an entire passive construction is indicated by the symbols 'NT' (non-transitional) or 'T' (transitional). The Aktionsart of the verb whose passive participle occurs in the construction is indicated by superscript '^{NT}' or '^{T}'. Thus, 'NT^{T}' indicates a passive construction with non-transitional Aktionart formed from a verb whose passive passive participle is underlyingly transitional. An example of such a construction is '(having been) done'. There are four semantic combinations for the relationship between the Aktionsart of the passive construction and that of the underlying verb, namely NT^{NT}, T^{NT}, NT^{T} , and T^{T}. Our model addresses this question: given these four combinations, which of the copulas, *weorðan* or *wesan/beon*, would we expect in a compositional model? We predict that wherever *weorðan* is used, the passive construction as a whole has transitional meaning; where the non-transitional *wesan* is used, transitional meaning can come only from a transitional participle, excluding ingressive (T^{NT}) constructions. Apart from these restrictions, either copula should be possible. This leads us to expect the following distribution:

Aktionsart	Expected copula	
	weorðan	*wesan/beon*
NT^{NT}	No	Yes
T^{NT}	Yes	No
NT^{T}	No	Yes
T^{T}	Yes	Yes

The actual distribution of the two copulas is as follows:

Aktionsart	Actual copula	
	weorðan	*wesan/beon*
NT^{NT}	0.00% (n=0)	100.00% (n=285)
T^{NT}	71.43% (n=5)	28.57% (n=2)
NT^{T}	0.00% (n=0)	100.00% (n=134)
T^{T}	26.61 % (n=318)	73.39% (n=877)

The only departures from this model (two examples in which an ingressive passive construction 'T^{NT}' is formed with *wesan/beon*) are statistically insignificant and occur in the subjunctive, where the transitional force of the construction is not salient.

We find further patterns of distribution when we analyse *wesan* and *beon* separately rather than as a single verb. *Beon*, which is used only in the grammatical present, is preferred over both *weorðan* and *wesan* when the Aktionsart is transitional, but *beon* is, like *wesan*, still used for non-transitional Aktionsart, so its functional range does not correspond exactly to that of *weorðan*. However, when we separate the instances of the (semantic) present into three different temporal categories of specific present (i.e. continuing at speech time), generic, and future, our results show a clear pattern: *wesan* is preferred for specific presents and *beon* is preferred (over both *wesan* and *weorðan*) for generics and futures.

The compatibility of our findings with the compositional semantic model has implications for the grammaticalization of these constructions. The compositional model represents the semantic structure that may be supposed to have existed before the occurrence of any grammaticalization. If there has been no change from this state, then in the absence of other evidence it would be more parsimonious to assume that grammaticalization has not taken place at the period in question. We suggest that this is a more robust test for grammaticalization than was previously available.

Our findings may shed light on the reasons why *weorðan* was lost after the OE period. If, as we argue, the combination of *weorðan* and a passive participle was not grammaticalized, the loss of *weorðan* would lead to the loss only of a lexeme rather than to the loss of a whole construction. Moreover, the combination between *wesan*/*beon* and the passive participle can be used to express all of the Aktionsart categories in our semantic model, except for the rarely occurring ingressive category, so that, even without *weorðan*, the language still had the resources to denote situations in these categories. In transitional situations, *wesan*/*beon* is preferred to *weorðan*. A possible clue to this preference may lie in the respective functions of *wesan* and *beon* in the (grammatical) present, where *wesan* preferred for specific presents and *beon* for generics and futures. It is possible that in this tense, these temporal distinctions were more salient than distinctions based on Aktionsart, and that the need to mark transitional Aktionsart unambiguously with *weorðan* was secondary. This in turn could have led to *weorðan* being a marginal verb in passive constructions altogether.

A cognitive model of grammatical functions in language processing

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A novel computational model of language processing is presented, that uses functional relationships as defined in Lexical Functional Grammar, as well as phrase-structure, to generate syntactic structure on-line. Time-courses of processing will be modelled from competing syntactic accounts of unbounded multiple-gap dependencies and compare these with empirical data.

The empirical challenge It has been demonstrated for a number of years that reading speed slows at points in a sentence where an open unbounded dependency might be attached, sometimes called gap sites. These phenomena are sensitive to island constraints, with no reading slowdown seen at illicit sites. Thus Phillips (2013) argues that at least some elements of syntactic structure are available to the parser early in processing (cf. models where syntactic well-formedness is checked at a later stage, or optionally).

The picture with parasitic gaps is more complicated. For example, the attachment site [A] in (1) is illicit, compared to the licit attachment site [B] in (2). However, as seen in (3), attachment site [A] is allowed if it is co-referent with a subsequent licit attachment at site [B].

(1) * What$_i$ did the attempt to repair [A]$\_\_\_i$ ultimately damage the car?

(2) What$_i$ did the attempt to repair the car ultimately damage [B]$\_\_\_i$?

(3) What$_i$ did the attempt to repair [A] $\_\_\_i$ ultimately damage [B] $\_\_\_i$?

Phillips (2006) found a processing slowdown in (3) at [A], although the site is only licit when a further attachment site is available. In structures where a parasitic gap was never possible, island constraints held and no slowdown was seen at illicit sites. Phillips argues that the parser's access to syntactic constraints is more sophisticated than simply recognising islands and suspending the prediction of attachment within them.

The grammar-theoretical challenge Many transformational accounts of unbounded dependencies and island constraints make use of constituent structure relationships (e.g. constraints related to c-command). Conversely accounts within LFG have focused on the role of functional structure using the notional of functional uncertainty with path constraints. For multiple-gap dependencies, Falk (2011) proposes constraints on the feature WHPATH, whereas Alsina (2008) uses functional prominence constraints on structure-sharing.

One way to assess the competing claims of these accounts is to compare the impact of including them as grammatical assumptions in computational models of processing. Each account presents different requirements for the content of memory storage chunks, available cues for memory retrieval, and maintenance vs. reactivation of information in working memory. The model presented is an attempt to do this.

Existing models of processing The model being presented is built in ACT-R (Anderson, 2007). Early work in ACT-R to model the time-course of language processing was carried out by Lewis and Vasishth (2005), henceforth L&V, who assume that only the word being attended to is maintained in working memory, and that attachment into structure is necessary before the next word is attended. Attachment follows via cue-based retrieval of previously-processed memory chunks, with abstract structural chunks being created if necessary. The developing syntactic structure is not available on-line, although it can be computed from the contents of working memory, producing a binary-branching constituent-structure tree . However, the time required to calculate the impact of long-distance c-structure constraints is likely to be much greater than values reported from experimental data, which raises problems for transformational accounts of island constraints. Engelmann (2016) has expanded L&V's work to model eye-movements

during reading. The capacity of his model is enhanced such that the current IP node can be accessed without a time penalty, and provides more retrieval buffers for grammatical information. This enables attachments to be generated between multiple chunks simultaneously, which is used in the new model.

The new model This model's core processing cycle adapts that of Engelmann's model. Syntactic structure comprises memory chunks representing f-structures, rather than c-structure nodes. As in L&V's and Engelmann's models, the full syntactic structure can only be calculated by retrieving memory chunks, but in addition to the word being attended, a 'live' chunk may be maintained in working memory. There is enhanced access to the memory chunk representing the current verbal predicate, analogous to Engelmann's assumption of enhanced access to an IP node. Crucially, it is not necessary for a syntactic chunk to be attached before the next word is attended, provided that its grammatical function (GF) is clear. The model also assumes that some information about the target GF for an open dependency is maintained. The number of memory chunks needed to represent a sentence, and therefore the number of attachments, is smaller than earlier models because the information provided by functional categories C, D and I sits in a memory chunk with a semantic PRED value, rather than in a distinct chunk. Thus parsing the sentence *The writer surprised the editors* generates 6 grammatical memory chunks in L&V's model: one for each word and one abstract structural chunk. The presented model generates 3 for the same sentence, representing *editor*, *surprise*, and *writer* respectively.

Regarding attachment, this is governed in L&V's and Engelmann's models by the availability of attachment sites found using retrieval cues appropriate to structural expectation and lexical information, and by specific attachment productions that represent phrase-structure rules applying a left-corner parsing algorithm. Memory chunks are generated for terminal nodes and for any intermediate nodes necessary to attach the current word to existing structure. In the new model, productions are selected taking into account the current processing state; lexical information, including but not limited to syntactic category; and the level of activation of memory chunks outside working memory. The successful production determines whether a new chunk is attached to the current 'live' chunk or whether a chunk must be retrieved; which attachment sites are available within a given memory chunk as attribute-value pairs are added; and also which chunk is 'live' once attachment has been made. This might be the current 'live' chunk, the newly-attached chunk, or a previously-processed chunk (e.g. returning to a matrix clause after processing an argument of an embedded predicate).

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The implication of the three prenominal forms of Japanese mimetics

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Roy (2013) suggests the traditional binary contrast between individual-level predicates and stage-level predicates is not enough to explain three different kinds of interpretations observed in non-verbal predication cross-linguistically (e.g. in Spanish, French, Russian and Irish). This study provides data from Japanese in support of Roy's three-way distinction. I observe that three prenominal forms of non-verbal predicates exhibit three different interpretations, namely 1) "situation-descriptive", 2) "characterizing", and 3) "defining" in Roy's terms.

French data is presented to illustrate Roy's three-way distinction.

(1) a. Paul est malade. 'Paul is sick.'(Roy 2013: (115))
I. The situation-descriptive reading
II. The characterizing reading
b. Paul est un malade. 'Paul is a sick person/a patient.' (Roy 2013: (116))
III. The defining reading

(2) Paul est ivrogne$_{\text{-noun}}$, mais la exceptionnellement il n'est pa ivre$_{\text{-adjective}}$. (Roy 2013: 123)
'Paul is a drunkard (the characterizing reading), but now (exceptionally) he isn't drunk (the situation-descriptive reading).'

Roy (2013:72) states that the sentence in (1a) is ambiguous: two readings are possible. The first is that Paul is "experiencing sickness" (i.e. the situation-descriptive reading). The latter is that *malade* is predicated of Paul (i.e. the characterizing reading). Similarly, in (2), the predicate *ivrogne* in the first conjunct denotes a natural quality of Paul's character (i.e. the characterizing reading), while the adjectival predicate in the second conjunct describes a circumstance in which Paul holds the 'ivre' quality (i.e. the situation-descriptive reading). The important points of Roy's claims about the predicates found in the situation-descriptive reading are that they "report a situation" and that nouns cannot denote this reading in the four languages she investigates. For instance, predicates are adjectives in (1a) for the situation-descriptive reading and in the second conjunct in (2). In contrast, Roy states that nouns can denote the rest of the two readings in French and Spanish (see the predicates in (1b) and the first conjunct in (2)). By Roy's definition (2013:35), predicates in the characterizing reading and the defining reading both ascribe a property to an individual, but a difference between the two reading is that predicates in the defining reading denote a defining property, which is "salient enough to define an individual as a particular member of a class of individual".

Japanese mimetics appear in three forms prenominally, as shown in (3a) – (3c):

(3) a. (*ima) fuwafuwa-sita keeki (Kamiya 2016)
now soft and fluffy$_{\text{-attributive marker}}$ cake
'(some) soft and fluffy cake(s)'
b. ima masani fuwafuwa-na keeki (Kamiya 2016)
right now soft and fluffy-COP-$_{\text{prenominal form}}$ cake
'(some) cake which is now soft and fluffy'

c. fuwafuwa-no keeki (Kamiya 2016)
soft and fluffy-COP-$_{\text{prenominal form}}$ cake
'(some) soft and fluffy cake(s)' or '(some) cake which is now soft and fluffy'

The mimetic *fuwafuwa* refers to a physical condition or a state that a referent is in, and it forms a tenseless attributive modifier when followed by *sita*, where *ta* is not a preterit, in (3a) (Hamano 1986; Kamiya to appear). When the mimetic appears with the prenominal form of the copula *na*, on the other hand, temporal modification is allowed, as shown in (3b) (Kamiya 2016). Although these observations suggest that the syntactic properties of the projections of one modifier must be different from the other, the difference between the two readings assigned by the two forms, namely M-*na* and M-*sita*, is subtle in (3). Sells (2017:16) asks what determines native speakers' morphological choice between *na* and *no*.

Here, I propose that the mimetic-*na* form has the situation-descriptive reading (see (4a) and (5a)): the head noun is in a condition where it has a quality expressed by a mimetic, which the referent does not necessarily always have or a condition other entities of the same kind do not usually have (i.e. unusual condition). In non-mimetic words, it is nominal adjectives – which are a subclass of adjectives in Japanese – that appear in the frame of X-*na* (e.g. [*kirei*$_{\text{NA}}$-*na*] *hada* 'beautiful skin'), and this follows Roy's claim that predicates found in the situation-descriptive reading are not nouns. Further, I propose that the mimetic-*no* form and the mimetic-*sita* form both denote properties, but M-*no* denotes a distinctive property of the head noun (i.e. the defining reading) (see (4b), (5b), (4c) and (5c)).

	Situation-descriptive reading	Defining reading	Characterizing reading
(4)	a. ***subesube-na*** *hada* M. smooth-COP-$_{\text{prenom.}}$ skin 'My skin is usually dry, but is now in a (better) condition where it is nice and smooth.'	b. ***subesube-no*** *hada* M. smooth-COP-$_{\text{prenom.}}$skin 'The "smooth" quality is a distinctive property of the skin.'	c. ***subesube-sita*** *hada* M. smooth-$_{\text{att.}}$ skin 'smooth skin'
(5)	a. ***kasakasa-na*** *hada* M. dry-COP-$_{\text{prenom}}$ skin 'The skin that I am referring to is in a condition of being dry.'	b. ***kasakasa-no*** *hada* M. dry-COP-$_{\text{prenom}}$ skin 'The "dry" quality is a distinctive property of the skin.'	c. ***kasakasa-sita*** *hada* M. dry-$_{\text{att}}$. skin 'dry skin'

These proposed readings are observable when multiple mimetics participate in prenominal modification. In this talk, I will present data in which M-*no* cannot appear in the higher position than M-*na*, while M-*sita* can freely appear in the structure.

Selected references: Hamano, S. (1986). The sound-symbolic system of Japanese. PhD. Dissertation, U. of Florida. Kamiya, M. Non-tensed attributive modifiers in Japanese: Japanese mimetics as prenominal modifiers. to appear in *Proceedings of WAFL12*. Roy, I. (2013). *Nonverbal predication: copular sentences at the syntax-semantic interface*. Oxford: OUP.

Testing theories of temporal inferences: Evidence from child language

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Background: Sentences involving past tense verbs like (1) tend to give rise to the inference that the corresponding present tense sentence (2) is false. By contrast, (2) doesn't suggest in any way that (1) is false.

(1) My dogs were on the carpet. $\rightsquigarrow$ *My dogs aren't on the carpet*

(2) My dogs are on the carpet. $\not\rightsquigarrow$ *My dogs weren't on the carpet*

Following Musan (1995) and Magri (2009, 2011), Thomas (2012) derives the inference shown in (1) as a scalar implicature arising from negating the competitor in (2); in other words a past tense sentence triggers the implicature that its present tense alternative is false. In addition, Thomas proposes that the absence of the inference in (2) is due to the latter not having (1) as a competitor. Under this analysis, the asymmetry between (1) and (2) is explained by reference to Katzir's (2007) structural theory of alternatives. More specifically, it is assumed that episodic present tense sentences like (2) have an LF like (3b), where in the T head there is only a pointer to the time of utterance N. On the other hand, the past tense counterpart in (1) would involve additional covert temporal and aspectual operators, as in (3a).

(3) a. [[$_T$ ONCE [PAST N] [my dogs are on the carpet]] b. [[$_T$ N] [my dogs are on the carpet]]

Crucially, under this proposal, the past tense sentence structurally contains its present tense counterpart. In Katzir's (2007) theory, this asymmetric structural complexity ensures that the present tense sentence is an alternative of the past tense one, but not vice versa. The structural assumption of Thomas (2012) leads straightforwardly to a clear developmental prediction. A robust finding from language acquisition research is that without extra facilitation, 4–6-year-old children compute fewer scalar implicatures than adults (Chierchia et al. 2001, Noveck 2001, Papafragou & Musolino 2003, Guasti et al. 2005, Barner et al. 2011, among many others). One recent explanation for this non-adult behaviour is that children have trouble accessing certain alternatives during scalar implicature computation, namely those alternatives that are to be derived via lexical replacement (cf. Tieu et al.'s *Restricted Alternatives Hypothesis* and discussion in Barner et al. 2011 and Singh et al. 2016). A further prediction of this hypothesis is that alternatives that are contained within the uttered sentence should not be problematic for children. This is supported by experimental evidence that children perform better on scalar inferences when the necessary alternatives are explictly included in the assertion, for example in free choice disjunction (Gualmini et al. 2001, Barner et al. 2011, Tieu et al. 2016, Singh et al. 2016).

Present study: Assuming the above developmental lexical access hypothesis for scalar inferences and Thomas's (2012) theory of temporal inferences, we derive the prediction (P):

P: Children will compute more temporal inferences than classical scalar implicatures.

We report on an experiment testing the prediction (P). Our experiment compared the performance of 4–6-year-old children and adults on temporal inferences like (1), scalar implicatures like (4), and adverbial modifiers like (5). The scalar implicature of (4) is assumed to require lexical replacement (*some* vs. *all*), providing a baseline of an inference which children typically struggle with. Turning to (5), the inference *My dogs jumped* is generally considered to be due to an alternative which is contained in the uttered sentence, e.g., *My dogs didn't jump* for (5). It provides a baseline for an inference children are predicted to be able to compute.

(4) Some of my dogs jumped on the bed. $\rightsquigarrow$ *Not all of my dogs jumped on the bed*

(5) My dogs didn't jump high. $\rightsquigarrow$ *My dogs jumped*

Given this double comparison, the prediction (P) sets up the expectation that children's performance on temporal inferences and sentences with adverbial modifiers like (5) will be more adult-like than their performance on sentences involving *some* like (4).

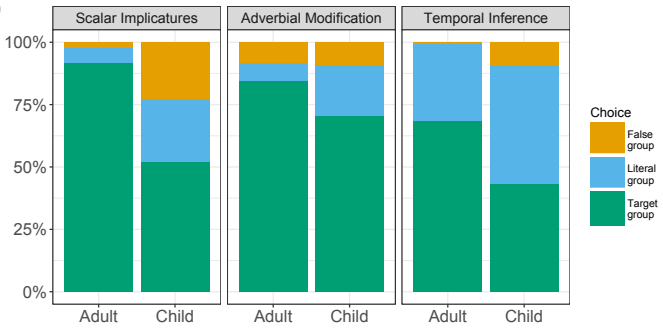
Experiment: *Methods*: We tested the prediction (P) using the following task: participants heard a puppet uttering a "clue" such as (1), (4), or (5) and were asked to guess which one of three groups of pictured characters, e.g., dogs (Target Group, Literal Group, False Group) belonged to the puppet. The materials were designed so that each set of dogs would make the sentence or its implicature true or false (see Table 1). An anonymized online version of the experiment can be found at `http://spellout.net/ibexexps/AnonymizedExps/SuB`.

	Target Group	**Literal Group**	**False Group**
Literal meaning	True	True	False
Inference	True	False	False
Temporal inference (1)	in basket, then move	in basket throughout	never in basket
Scalar implicature (4)	some on the bed, some not	all on the bed	none on the bed
Adverbial modification (5)	jumped low	didn't jump	jumped high

Figure 1: Experimental conditions

Each participant received 4 repetitions of each target type, 2 control items that contained 1 Target Group and 2 distinct False Groups, 2 present tense controls, and 3 fillers. To ensure that participants would distinguish between past and present tense, the animals remained animated until a response was provided.

Results & Discussion: 40 English-speaking adults and 17 children (4;02–5;10, M=5;00) participated in the experiment. The percentages of each of the group selections are provided in the graph. The adults overall systematically favoured the target group across conditions, although more literal choices were observed for the temporal targets. The children performed well on controls (91% accuracy); on targets, they chose the Target group less often than adults in the scalar implicature condition (mixed-effects logit model: $z = 3.0, p = .002$) but not in the adverbial modification ($z = 1.0, p = .30$) or temporal conditions ($z = 1.2, p = .25$). Child testing is ongoing, and we aim to test 40 children in total.



Conclusion: The present study evaluates the developmental predictions of a recent account of temporal inferences by Thomas (2012), and in addition provides novel data on children's ability to compute implicatures arising from adverbial modification in negative sentences. To this end, we developed a new selection task, the results of which replicate the robust finding that 5-year-old children derive fewer implicatures from *some* than adults, and reveal that children perform more like adults on temporal inferences and inferences arising from adverbial modifiers. This pattern of results is predicted by Thomas' (2012) theory of temporal inferences and the developmental lexical access hypothesis for scalar inferences.

Symbols In a Probabilistic World

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Phonemes play a central role in traditional theories of speech perception as access codes to the lexicon. On this view, phonemes have two essential properties, namely, they are 'segment-sized', i.e. the size of consonant or vowel, and abstract, i.e., a single phoneme may have different acoustic realisations. For example, the words 'back' and 'cab' are each represented in the lexicon by the same three phonemes, /k/, /æ/ and /b/ even though the consonants 'k' and 'b' are realised differently when they occur in the initial vs. final position.

Yet there is a long history of challenging the phoneme hypothesis, including growing criticism in recent years on the basis of long-term priming, perceptual learning, and related studies within psycholinguistics. In the past decades there have been two main loci of objection to phonemes as lexical access codes: (i) size, i.e. that a phoneme corresponds to a single segment such as a consonant or vowel and (ii) abstractness, i.e., that phonemes are position- and/or context-independent symbolic units.

I will defend the phoneme hypothesis, in two main ways. First, we show that rejection of phonemes is often based on a flawed interpretation of these empirical findings. In particular, I will argue that graded effects in speech perception can emerge in a system with localist symbolic phoneme representations. Second, all research that is taken as evidence against phonemes is based on psycholinguistic studies of single words. I will provide strong positive evidence for phonemes on the basis of linguistic data, including linguistic analyses of complex word forms and sentences.

I will conclude by sketching out a neuro-computational pathway for processing a speech signal en route to word identification and discussing representational vs. computational units involved in the computation.

Stability and variation of inflectional morphology in medieval code-switching

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In my contribution I address stability and variation of inflectional morphology based on empirical evidence from historical written code-switching (CS) and discuss them in the light of structural approaches proposed for modern oral and written CS (Belazi et al. 1994; Myers-Scotton 2002; MacSwan 2014). The aim of this is twofold. First, I show which syntactic structures and morphological reflexes of syntactic relations are robust/stable and which ones are more tolerant/variable under contact. Second, I propose an approach to the theoretical modeling of CS constraints, which is designed to capture the observed variability and stability in historical and also in modern CS.

My line of argument is based primarily on examples extracted from a collection of Latin/Middle English sermons from ca. 1450 (ed. Horner 2006; Wenzel 1994). These show alternation and insertion patterns strikingly similar to the ones reported in systematic accounts of modern CS (Muysken 2000; Myers-Scotton 2002). In the sermons, the mixing patterns in the verbal domain are consistent with the predictions of Myers-Scotton's *Matrix Language Frame* (*MLF) Model* (2002). The position of the finite verb and the morphological expression of agreement on the verb appear to be regulated by the Matrix Language (ML) of the clause. However, the predictions of the model do not hold for case and concord marking inside the nominal domain. In addition to the predicted ML inflections on embedded language (EL) insertions (Ex. 1) or uninflected bare EL forms (Ex. 2) there are occasional EL inflections as a third variant (Ex. 3):

(1) ... emenda tuum *clock-um* ...
... adjust your *clock* ...

(2) Cape istum *wild fire* contricionis ...
Take this *wild fire* of contrition ...

(3) ... put away (...) þis sori *cecitatem desperacionis* ...
... put away (...) this sorry *blindness of despair* ...

In short, we find that concord shows variation whereas agreement does not. This asymmetry between variation in the expression of concord and stability in the expression of agreement is found also in Latin-Early Modern German CS (Auer & Muhamedova 2005; McLelland 2004) and is thus not peculiar to the text set. In both cases learned Latin is mixed with a vernacular. Thus the variability arises in a situation where one language is acquired informally as an L1 and the other language is acquired through formal schooling, with a strong focus on correct and incorrect morpho-syntactic forms. In such a contact setting the prescriptive power of explicitly learned morpho-syntax creates an additional CS variant. This variant, however, does not result in random mixing but appears to be subject to its own DP-internal mixing restrictions, especially with respect to the insertion of EL attributive adjectives.

The MLF Model in its current version takes the CP as its unit of reference, i.e. one ML is assigned to an entire clause. When looking at certain types of CS, the CP seems too large a domain to capture restrictions and peculiarities that affect smaller functional projections (cf. Belazi et al. 1995; Bury & Deuchar, unpubl. MS). ML-regulated restrictions applicable only at the CP level cannot account for differences between agreement marking (late outsider system morphemes on the IP level) and the marking of case and concord (late outsider system morphemes on the DP level). I propose to keep the ML approach and the constraints proposed

by Myers-Scotton, but to adjust it in a way that includes the functional levels of IP and DP and takes *Extended Projections* (Grimshaw 2005) as the domains to which an ML is assigned. Adjusting the domain to which the MLF constraints apply from a complete CP to extended projections allows us to capture the observed asymmetry as well as the variation/optionality concerning the morphological marking of syntactic relations in historical CS.

I conclude that even though individual languages are subject to continuous change, CS patterns remain surprisingly stable through the centuries. Additional variants can arise in a specific linguistic setting where one language is primarily spoken and transmitted orally and another one is acquired in an official setting, primarily through explicit teaching of prescriptive rules. However, this type of variation occurs with a low frequency and it does not seem to leave a lasting imprint on the recipient language.

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The logic of Korean honorification

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1. Background

Korean has a complex system of honorification, both in the nominal and verbal domain (Sohn 1994). The focus of this paper is the verbal subject honorific, as illustrated in (1):[1]

(1) sensayngnim-kkeyse coen-ul ha-**si**-ta.
teacher-HON.NOM *advice*-ACC *do*-SH-DECL
'The teacher gives advice.'

Despite its commonly used name, the target of *-si-*, the person honoured, is not necessarily the grammatical subject of the clause. In fact, the target must merely be related to the subject in some way, and need not even be mentioned in the sentence:

(2) a. halmeni-kkeyse pal-i apu-**si**-ta.
grandmother-HON.NOM *arm*-NOM *hurt*-SH-DECL
'Grandmother's arm hurts.'
Inalienable possession. Target = Grandmother.

b. %halmeni-uy khep-i yeyppu-**si**-ta.
grandmother-GEN *cup*-NOM *beautiful*-SH-DECL
'Grandmother's cup is beautiful.'
Alienable possession. Target = Grandmother.

c. %kokayknim, i os-un phwumcel-toy-**s**-ess-sup-ni-ta.
customer this clothing-TOP *sold.out-become*-SH-PST-AH-IND-DECL
'Customer, this article of clothing has become out of stock.'
Potential possession. Target = customer (addressee).

d. kunmwu kanung ciyek-un Pusan-ina Ilsan-i-**si**-pni-ta.
work possible area-TOP *Pusan-or Ilsan-be*-SH-AH-DECL
'The area/region where (the honoured one) might work is Pusan or Ilsan.'
Spatial proximity. Target = potential worker (Kim & Sells 2007: 319).

Examples (2b) and (2c) are not acceptable in Standard Korean, but are prominent in the speech of younger, especially city-dwelling, Koreans.

Clearly, the target of *-si-* is not given definitively by reference to the grammatical subject. But neither can the target be totally unrelated to the subject. The exact relation between the two is usually relegated to pragmatics in some way, with no further explanation. Potts & Kawahara (2004: 263) avoid the issue, saying "[t]he exact nature of [the relation in question] is not of direct concern to us here". And Kim & Sells (2007: 332) note that "[e]xactly how the target of honorification is determined still awaits a full explanation".

In this paper, we attempt to give some explicit formulation to how this pragmatic relation is determined, arguing that there is an algorithm for calculating the target of honorification, and show that it makes correct predictions about the interpretation of sentences containing multiple human referents.

[1] We use the Yale system of romanisation for Korean, and the standard abbreviations for grammatical morphemes given by the Leipzig Glossing Rules, with the following additions: HON = honorific, SH = subject honorific, AH = addressee honorific.

2. Analysis

We propose to relate the target and the (referent of the) subject via a pragmatically given relation based on the notion of 'proximity' (Barker 1995): the target is the 'closest' human referent to the subject. We can spell out the top end of such a spectrum of closeness as follows:

(3) identity > inalienable possessor (> alienable possessor > potential possessor) > ...

In general, the preferred option is for the target to *be* the subject; this is the relation of identity. This will be the case for canonical subject honorific sentences like (1). If the subject referent is not human, as in (2a) or (2b), then we descend the hierarchy, and try the possessor of the subject; in both these cases, this is human, and so it is identified as the target. (In the more conservative standard variety, the bracketed portion of the hierarchy in (3) is not available, so this is only possible with inalienable possessors.) If the possessor is not human either, as in (2c), then potential possessors are available too, in this case the customer. Past this point, other relations of proximity are permitted, such as the literal spatial proximity appealed to in (2d).

Our proposal makes a number of concrete predictions, which are borne out by the data. Firstly, by making reference to meaning over and above syntax, it implies that the target of honorification need not be mentioned overtly in the sentence, which is indeed the case:

(4) i chaina-nun alumdawu-**si**-ta.
this chinaware-NOM *beautiful*-SH-DECL
'This chinaware (belonging to the honoured one) is beautiful.'

Equally, it makes predictions about situations where multiple potential targets are available. For example, if there is a human subject with a human possessor, we predict that the subject should be the target of honorification, even if the possessor is a more obvious choice, since identity is higher on (3) than possession. This is once again what we find: (5) is a decidedly odd sentence, precisely because we are choosing to honour Mother's murderer, not Mother:

(5) ?emeni-uy salinca-ka canin-ha-**s**-yess-ta.
mother-GEN *murderer*-NOM *cruel*-BE-SH-PST-DECL
'Mother's murderer was cruel.'

We present further data that in fact all of the positions on our hierarchy are motivated by such interactions.

3. Conclusion

The so-called 'subject' honorific in Korean has been argued to have a pragmatic component, but the question of how its target is identified has generally been neglected. In this paper, we show that this pragmatic component need not be seen as a black box, and that there is a systematicity at play which is ripe for investigation. This suggests a direction for future research on making explicit the various kinds of pragmatic relations available and their relationship to one another.

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Contrast across discourse

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How standards of comparison for gradable adjectives like *large* or *small* are established based on contextual information has been an active area of research [1-5], but much of this work sets aside the question of what features of the context comprehenders rely on to determine an appropriate comparison class, and how different cues are weighed against each other. The present study uses the Visual World Paradigm [6] to investigate how comprehenders integrate visual and discourse context to referentially disambiguate an expression like *small square*. It builds on [7], which showed that a contrast set in the visual context (tall glass, short glass) increased listeners' expectation that a contrast set member would be described using a modifier (*tall*) due to the need to disambiguate from the other contrast set member, even when e.g. a taller object in terms of absolute height (pitcher) was also present in the display (visual contrast effect). This study extends this paradigm to include the prior discourse as an additional source of contrast.

Experiment1 asks to what extent contrast across discourse functions like visual contrast to aid referential disambiguation, and how discourse and visual contrast are integrated when both are present and provide conflicting cues to contrast. Participants listened to pairs of sentences like (1) accompanied by pairs of displays like (2). Target type (whether the target word, *square* in (1), was a part of a discourse or visual contrast set) was crossed with the presence of an additional contrast set (discourse contrast if the target a visual contrast set member, and vice versa). The visual contrast effect [7] was replicated: when a contrast set was in the visual context, fixations converged on the target referent in the 200-100ms preceding the onset of the target word (t=3.02, p <.0001).

There was also evidence that discourse contrast has a similar facilitative effect on resolving reference: when both visual and discourse contrast were present, the discourse contrast set member competed with the visual contrast set member, as indicated by later convergence on the target referent when both sources of contrast were present (100-200ms post target onset for discourse contrast targets, t=2.15, p <.05; 300-400ms post target onset for visual contrast targets, t=2.23, p <.05), than when only one contrast was present (300-400ms post target onset for discourse contrast targets, t=2.09, p <.05; see above for visual contrast targets). Target and competitor fixations were fit with mixed-effects logistic regression models in analysis windows aligned to linguistically-determined events (pre-adjective, adjective-to-target, post-target), with Target type (discourse, visual contrast), Number of contrast sets (one, two), Time, and their interactions as predictors. There were more competitor fixations for two-contrast than one-contrast conditions in the adjective-to-target (β=.042, SE=.0013, p <.0001) and post-target windows (β=.071, SE=.0027, p <.0001). However, discourse contrast was a less salient cue than visual contrast. Discourse contrast competitors gave rise to a weaker competitor effect than visual contrast competitors: there was a larger competitor advantage for visual contrast competitors in both adjective-to-target (β=.034, SE=7.25e^{-6}, p <.0001) and post-target windows (β=.047, SE=.0014, p <.0001). In addition, comprehenders recovered faster from discourse contrast competitors (100-200ms post target, t=2.15, p <.05) than from visual contrast competitors (300-400ms post target, t=2.23, p <.05).

While discourse contrast appeared to be a weaker cue than visual contrast in Exp1, in conversation, discourse contrast is often far more salient than visual contrast, simply because many conversations are not about the visual environment. In addition, richer discourses have

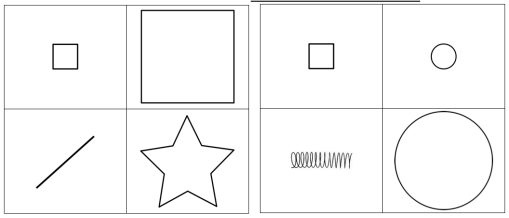
additional internal dependencies that the pairs of sentences in Exp1 do not. For instance, coherence relations [8] and Question Under Discussion structure [9] have been shown to influence online discourse interpretation [10-11], as has prosodically marked contrast [12]. The conceptual pact literature [13-15] also suggests that how something has been referred to in prior discourse influences how a listener expects the same item to be referred to subsequently. **Experiment2** asks whether prior experience describing classes of items in a particular way modulates the strength of discourse or visual cues to contrast.

Exp2 differed from Exp1 in two respects. First, test trials were preceded by a training block in which participants categorized one class of objects (2D shapes, e.g. square, circle) in terms of size (*large*, *small*), and another (3D shapes, e.g. cube, sphere) by whether they were *striped* or *solid*. Second, in addition to the four conditions from Exp1, the test block included two-context conditions where the competitor contrast item was from a different training category than the target, as in (3-4). If prior experience associating different category members with particular modifiers leads to expectations that the same conventions will continue to be followed, different category competitors (whether discourse or visual contrast) should be weaker competitors to the target referent than same category competitors.

To assess same v. different category competitor effects, target and competitor fixations from the two-contrast conditions were fit with mixed-effects regression models using the same analysis windows as for Exp1, with Target type (discourse, visual contrast), Competitor type (same, different category contrast), Time, and their interactions as predictors. There were more competitor fixations for same-category than different-category competitors in the adjective-to-target (β =.053, SE=.0034, p <.0001) and post-target windows (β =.053, SE=.0034, p <.0001), suggesting that unexpected modifier-category pairings were weaker competitors with target referents than expected ones. However, within different category conditions, comprehenders recovered more slowly from discourse contrast competitors (600-700ms post target onset, t =2.72,p <.01) than from visual contrast competitors (convergence on target 200-300ms post target onset, t =2.43,p <.05). The strong discourse competitor effect may be because this is the only condition that requires comprehenders to shift from one dimension of modification (e.g. *small/large*) to another (e.g. *striped/solid*) within a discourse (3-4); this suggests comprehenders may expect that, regardless of category-specific modification history, speakers will modify discourse referents in consistent ways.

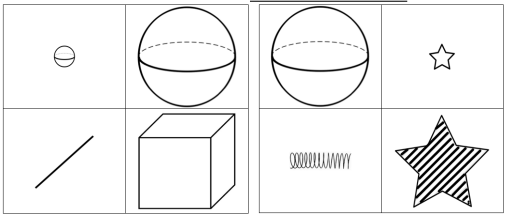
(1) Click on the large square.
Now, click on the small square.

(2)



(3) Click on the small sphere.
Now, click on the striped star.

(4)



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For THEMED SESSION Modeling Language Acquisition in Diachrony

The Acquisition and Actuation of the English Dative Constructions

Jordan Kodner & Charles Yang (University of Pennsylvania)

Background The dative constructions in English have been a central problem in the study of language acquisition (Baker 1979, Pinker 1989). At issue is the distributional contrast between the double object construction (DOC) and the *to-* dative construction (TD)

(1) a. John gave the ball to Bill/John gave Bill the ball.
b. John assigned the problem to Bill/John assigned Bill the problem.
c. John donated the picture to the museum/*John donated the museum the picture.
d.*John guaranteed a victory to the fans/John guaranteed the fans a victory.

How do children learn these restrictions in light of the fact that they do initially form over-generalizations only to retreat from them? Errors such as “I said her no” are robustly attested in child English (Bowerman & Croft 2008).

Sufficient and necessary conditions are unlikely for these constructions. For instance, while Latinate verbs (1c) tend to resist the DOC, some do allow it (1b, 1d; Levin 1993). Cross-linguistically, these constructions may be restricted to a few verbs (Harley 2002) or may not exist all (Chung 1998). Thus the dative constructions must be inductively learned as generalizations—and children occasionally go astray. How children generalize may also shed light on how these constructions arose in the history of English.

A theory of generalization The Tolerance Principle (Yang 2016) is a mathematically precise theory of inductive generalization. According to its Sufficiency corollary (p117), the child needs to see at least $N(1-1/\ln N)$ members to form a productive rule for a class of N member.

Using a six-million-word corpus of child-directed English, we identified 42 verbs in the DOC frame. Of these, 38 have clearly identifiable semantics of caused transfer, generally recognized as a necessary (but sufficient) condition for DOC (Levin 1993, Krifka 1999). The learner can then examine the class of caused-transfer verbs in the input to see if a sufficient majority are actually attested in DOC. The corpus contains 49 such verbs: there are 11 additional verbs with the appropriate semantics but are not used in DOC:

(2) address, deliver, describe, explain, introduce, return, transport, ship, mention, report, say

Children would not know why these verbs are unattested in DOC: some are impossible (*say*) while others are possible but didn’t get the chance to (e.g., *ship* ; the TD option was used by the caretaker). Yet 38 out of 49 meets the Sufficiency threshold ($49-49/\ln 49 = 37$), and children can regard DOC as productive: “I said her no” is accounted.

The Sufficiency Principle has a built-in mechanism for retreat from over-generalization. When the child learns more verbs in the caused-transfer class—including *donate* , unlikely to appear in child-directed input—the number attested in DOC will fall far below the sufficiency threshold. Of the relatively common 92 caused-transferred verbs, only 52 can be expected to appear in DOC but 72 is needed for sufficiency. The child thus retreats and lexicalizes those DOC-attested verbs, although smaller semantic classes may be identified (e.g., verbs of telecommunication) for which DOC remains productive.

Actuation of the To-Dative The likely origin of the TD is in constructions (dir-t *o* ; (3)) with PP complements headed by *to* whose objects are ambiguously recipients or goals (Levinson 2005, Hallman 2015). Additional ambiguity came from *to* with abstract caused motion (e.g., with *say*) in Old English (YCOE), something common cross linguistically (4). Learners only had to analyze these ambiguous constructions as dative constructions for the TD to gain a foothold in the language. A similar leap was made in North Germanic and Romance.

(3) Alice sent a book to the Civic Center. / Alice threw a book to Bob. (*ambiguous dir-to*)
(4) . . .*and hu miht þu secgan to ð inum bre ð er þus:* (coaelhom,+AHom 1 4:146.2080)
The Sufficiency Principle Diachronically Once a child interpreted an ambiguous construction as a TD, then it became subject to the process of rule generalization. Applying the acquisition model on the Middle English verbs attested in PPCME2 can assess the extent to which TD was extended from verbs appearing in ambiguous dir-to to other verbs in the same semantic class. While it's impossible to obtain accurate statistics of child-directed input the time of change, certain statistical trends of verb frequencies appear stable. For example, the most frequent relevant verbs in PPCME2, *give* , *say* , *show* , etc., are among the most frequent in child directed corpora as well. PPCME2 contains 75 dative verbs of which 36 have the potential for dir-to. Applying the SP, there are enough dir-to verbs to generalize the to-dative to 9/18 of Levin (1993)'s classes in one generation. For example, the PUTTING IN A SPECIFIED DIRECTION class contains seven members (*fasten, teiten, join, lift, reren, raise,* and *hewen*, N = 7), four of which can support dir-to: this exceeds the sufficiency threshold and thus learners could form a productive generalization for this class. Crucially, the next generations, hearing dir-to *and* to-datives from these classes have sufficient evidence to extend the to-dative to *all* verbs with broadly defined recipients. This predicts that the TD should have spread rapidly and should be attested even where it is prohibited in Modern English. This bears out in the Middle English corpus with *save* and *forgive* for example even in the earliest documents.
(5) *He **saued to** hym þe helpe of hys chosen and hys holi pouste*. (CMEARLPS ,119.5212)
*(6) and pyteuously **forgyve** offences and dettes **to** theym...* (CMINNOCE ,8.117)

Since the TD in Modern English is no longer widely accepted with verbs like *ask*, *save*, *judge*, or *forgive*, it is interesting to ask whether the SP can account for the retreat of the construction as well as its spread. An analysis of Early Modern English with the PPCEME corpus demonstrates how changes to the lexicon could tilt the balance against the to-dative. PPCEME contains 118 dative verb lemmas of which 57 also occur in the Middle English PPCME2, and 44 dir-to lemmas, of which 27 occur in PPCME2. We recalculate thresholds in this updated lexicon according to the SP, conservatively assuming that all dir-to verbs and all verbs attested in PPCME2 already support the to-dative. Under the updated lexicon, the TD generalizes to the new lemmas in every class except exactly those which forbid it in Modern English. Since these classes (BILL, APPOINT -type, etc.) have no dir-to verbs among their members, the TD's status among them is at the mercy of the rest of verbal lexicon. Any slight changes to the system, such as the introduction of new vocabulary in Early Modern English, had the power to upset that balance.
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Accounting for depressor effects: A multi-layered approach

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Background. The early work of Haudricourt (1954) on Vietnamese tonogenesis, where the loss of voicing in initial obstruents correlates with the development of tonal contrasts, reflects an intrinsic connection between voicing and tone. This same connection is seen in depressor effects where generally voiced obstruents result in the lowering of the high tone on a following vowel. The representation of this connection between voicing and tone faces many challenges in standard feature theories which make no connection between a feature like [voice] and features like [high] or [low] which may be used to represent tone. In this vein Element Theory which assumes that the element |L| represents voicing, low tone, and nasality is much more amenable to an analysis that makes this observed connection more explicit. This paper presents the merits of an element-based approach and furthermore shows that a more enriched representation of elements than is standardly assumed – in the form of an element geometry – is required in order to explain the range of segments that can act as triggers of depressor effects.

The empirical focus will be on depressor effects in Bantu and Khoisan. Canonically voiced obstruents are the main depressors triggering low tone on a following vowel seen centrally in Southern Bantu languages like Ikalanga, Xhosa, SiSwati, and Tsonga. But in addition, it is observed that in some languages breathiness and aspiration also contribute to depressor effects, with the latter being surprisingly unusual due to its lack of voicing. By contrast plain nasals (in contrast to breathy nasals) are never depressors in these same languages.

Problem. From an Element Theory perspective although low tone, voicing and nasality all share the element |L|, there is an asymmetry between nasality and voicing in terms of depressor effects with the latter triggering depression but the former not. Furthermore, the triggers of depression in Bantu and Khoisan vary dramatically from voicing, breathiness to aspiration and an analysis reliant on |L| would have to explain why breathy and aspirated sounds have a depressor effect.

Analysis. Rather than seek phonetic explanations (Traill, Khumalo & Fridjhon 1987; Jessen & Roux 2002, etc.), this paper proposes to extend geometry structures proposed in Clements (1985), van der Hulst (1989, 2005, 2015), Kula (2002, 2012) and Botma (2004) as a way of unifying these seemingly unrelated triggers of depression under a single element |L|. This involves a multi-layered recursive element geometry as presented in Figure 1. Element interpretations are given on the right side of the figure. Figure 2 is a 3-dimensional view. The essence of the proposal is that it allows |L| to be represented in different positions within a geometry in a principled way that ensures that a depressor triggering |L| is peripheral in the structure and thereby able to more easily interact with elements on the tonal tier.

Figure 1: the 2-D element geometry

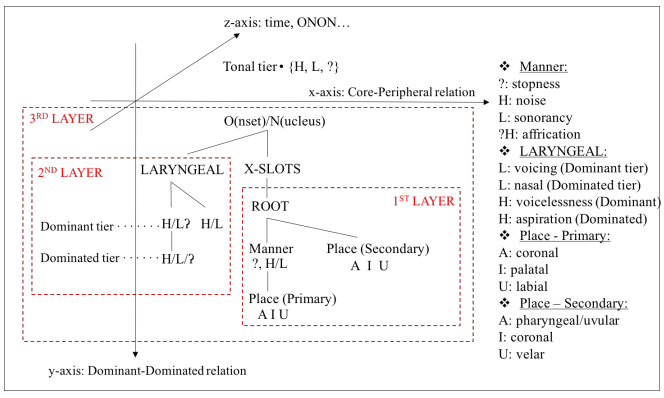
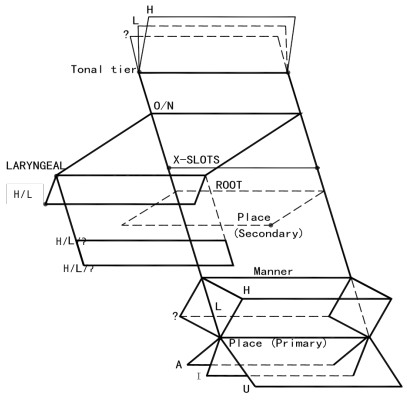


Figure 2: the 3-D element geometry



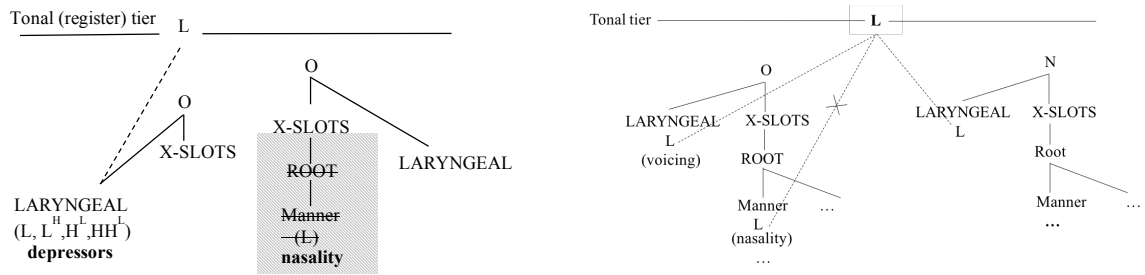
In this proposed model sub-syllabic structure consists of a nested structure built up recursively in three *layers* in a bottom-up approach (as indicated by the red-dotted boxes in Figure 1), starting from the core ROOT, to the peripheral LARYNGEAL and to the ultimate O(nset)/N(ucleus). Each of the three layers follows a basic structure where vertical lines indicate core dominance relations and slanting lines indicate peripheral structure. A summary of relations in each layer is given in Table 1 below.

	NODE	**Dominant**	**Dominated**	**Peripheral**	**Tier node types**
1ST LAYER	ROOT	Manner	Place (Primary)	Place (Secondary)	Articulatory gestures
2ND LAYER	LARYNGEAL	H/L/ʔ (Dominant)	H/L/ʔ (Dominated)	H/L	elements
3RD LAYER	O/N	X-SLOTS	ROOT	LARYNGEAL	NODES

Table 1: three layers of the element geometry

Within each layer there is a core-peripheral asymmetry with the core structure being mandatory while the peripheral structure is optional. The level of embedding determines the level of complexity of the structures within. Thus layer 1 (ROOT) at the heart of the structure contains the larger categories of manner and place which themselves contain elements, but the outer layer 2 (LARYNGEAL) only contains the smallest units – the elements. Furthermore, in the peripheral Laryngeal the Dominant tier can only license the same elements on the Dominated tier, in contrast to the ROOT in layer 1. Like Kehrein (2002) we assume that Laryngeal is directly dominated by the prosodic unit O/N, and further argue that only Laryngeal and O/N are visible to prosody – here the tonal tier – while structures below the X-slot are not. This captures the fact that only |L| in Laryngeal triggers depressor effects by interaction with the prosodic level as captured in Figure 3 below.

Figure 3: the depressor-tone interaction



From the overall representation in Figure 1, voicing is captured by |L| in Laryngeal and therefore triggers depression. Breathiness has a complex structure $|L^H|$ in Laryngeal where the dominant |L| in the core also triggers depression. This representation is in line with the assumption that breathy sounds combine voicing and aspiration (where aspiration is represented by the superscript H that resides in the peripheral). Non-depressor plain aspirated obstruents are represented as |HH| (where the second H represents a dominated element) and therefore have no depressor effect as they lack |L|. By contrast depressor aspirated stops are represented as $|HH^L|$ showing that they differ from plain aspirates in containing the depressor triggering |L| i.e. |L| in the peripheral of Laryngeal. The argument is thus that any aspirated obstruent that triggers depression cannot be a plain aspirate but must contain some inherent further complexity viz. |L|. The contrast between breathy nasals that cause depression in some languages (e.g. Tsonga) and plain nasals that do not is captured by breathy nasals having an |L| in Laryngeal which is associated to the breathy voicing they possess.

The depressor effect itself results from the relative mobility of the outer Laryngeal |L| interacting with and replacing a |H| tone on the tonal tier which is associated with the following vowel as shown by the rightward dotted line in Figure 3.

Nonstandard use of directional Ps in Spanish: semantic complexity correlates with possible P choices?

M. Eugenia Mangialavori Rasia (CONICET) & Rafael Marín (Universitat Pompeu Fabra)

Varieties like Mexican Spanish [MS] display a non-standard use of the directional P *hasta* 'up to'. A combination with the copula *estar* 'be' is productively used in MS in locative constructions like (1) (Lope Blanch 2008, Bosque & Bravo 2011), and alternatively, in non-spatial constructions like (2). (1)c also shows that MS diverges non-trivially by combining *hasta* with prepositions and adverbs (e.g. *adelante* 'in front', *arriba* 'up') which in the standard distribution can only appear directly preceded by *estar* (*está (*hasta) adelante*). These occurrences draw important contrasts not only with respect to 'standard' Spanish [SS], but they are also unexpected more generally for various reasons.

(1) a. La casa está hasta la punta del pueblo.
the house is$_{ESTAR}$ up to the tip of-the village *'The house is at the end of the village'*
b. La caja gris que está hasta la derecha.
the box grey that is$_{ESTAR}$ up to the right *'The grey box that is on the right'*
c. El puente está hasta el límite oeste de la ciudad.
the bridge is$_{ESTAR}$ up to the limit West of the city *'The bridge is at the West border of the city'*
d. En la lista de Fortune Slim está hasta adelante.
in the list of Fortune Slim is$_{ESTAR}$ up to in front *'In the Fortune Magazine list, Slim is ahead'*
e. El salón comedor estaba hasta el último piso.
the dining room was$_{ESTAR.PT}$ up to the last floor *'The dining room was on the top floor'*

(2) a. La tarea estará terminada hasta el final del día.
the work be$_{ESTAR.FUT}$ finished up to the end of-the day *'The work will be finished by the end of the day'*
b. La normativa recién estará lista hasta julio.
the regulation only be$_{ESTAR.FUT}$ ready up to July *'The regulation will be ready by July'*

(3) La Selección estará completa hasta el lunes. ⇒'*The Team will be complete <u>by</u> Monday'* (MS)
the team be$_{ESTAR.FUT}$ complete up to the Monday '*The Team will be complete <u>until</u> Monday*' (SS)

Problems. ●*hasta*, a *directional* boundary P, is generally expected with dynamic verbs, but not with statives; and it is certainly not expected to yield locatives like (1), according to both SS and general (crosslinguistic) standards.●(2) is possible in SS, under a crucially different ('until') reading in line with the standard semantics of *hasta* (3). **Hypothesis**: A natural question to ask is whether these MS constructions could be related to some innovative use of either the copula or the P. However, a systematic contrast with the standard P choice (*estar en/a*)—both possible in MS—discourages simplifications along these lines, as well as a coercion-like solution to the alleged conflict between a directional P and a stative verb. Experimental surveys on natives indicate that *estar hasta* is used in MS to introduce a sense of distance (reported as 'remoteness' (50%), 'distance' (30%), 'route' (20%)) from an implied starting point (in principle, the location of the speaker), thus allowing to introduce additional spatial information. The non-trivial P choice, along with the relative complexity introduced by *hasta*, also argues against a potential ambiguity of P. Instead, the situation is closer to the notion that there are no lexically ambiguous Ps, and that the delivery of a locative relation from a directional P is compositional (Gehrke 2006 *i.a.*). The idea is supported by productivity patterns with verbs of spatial configuration combined with *hasta* in MS (4). *hasta* is optional but not irrelevant: (4) contrasts with the standard distribution (*vive/está/se sienta adelante*) by involving the noted sense of distance.

(4) Juan {está/vive/se sienta} hasta adelante. *'Juan is/lives/seats at the front'* (cf. Lope Blanch 2008:78)

Proposal: A non-trivial P choice. Key to the problem: two general conditions constraining the combination of a copula with a directional P (5). An endpoint condition furnishes the proposal that *hasta* can be associated with a locative predication different from the one yielded by locative Ps (e.g., somehow benefitting from the directionality of *hasta*) in combination with the locative copula *estar*. The specific semantics of locative *estar hasta*, intuitively related to some sort of perspectival location—which is central to explain the fact that this alternative coexists non-trivially with the standard locative P choice (*a/en*)—, matches the additional variable introduced by *from here* in

(6)a). Cresswell (1978) notes that this condition depends on the denotational properties of the directional P, which introduces a contextually determined point of view from which the object is located. Note that in MS this entailment is strong enough to render the adjunct redundant (cf. (7)).

(5) Locative Ps can always be used in combination with the copula *be* in a locative sentence. With directional Ps this is sometimes possible if the location is understood as the endpoint of a hypothetical journey described by the preposition from an implicit point of view, as in (6)a, or with a measure phrase, as in (6)b. (Cresswell 1978:112, also in Zwarts 2005:742)

(6) a. The house is {behind/outside/across} the woods (from here) (Zwarts 2005(3))
b. The car is one mile {from the garage/to the east}

(7) La casa está (hasta) detrás del lote (*?desde aquí). 'The house is behind of the lot (from here)'

The general analysis is compatible with fundamental definitions of *hasta* such as Talmy's (2000:254). The specific implementation builds on studies where the aspectual contribution of spatial Ps is laid out in terms of Vector Space Semantics [VSS] (Winter 2001 *i.a.*). Proposal: MS locatives determine a specific circumstance where P introduces an endpoint in an (abstract) set of ordered vectors, with a starting point and points in between on which the direction lexically encoded by P imposes an ordering (Zwarts's 2005:744 definition of Path). Our analysis rests on two assumptions: (i) location and other spatial properties are represented as *relative positions* modelled by vectors (Zwarts&Winter 2000); (ii) paths (atemporal stretches of space) *require* a fixed reference object [RO] (Zwarts 2005:283) to locate the object. Even if this RO also figures in simple locative constructions (*estar en/a*), applied to directional Ps this essential relativity allows for the possibility to accommodate the '*from here'* entailment making *hasta* a non-trivial choice in MS and explaining non-standard uses under a general condition like (5). **VSS account:** Vectors are analyzed in the semantics of directional Ps by representing a spatial stretch (a located vector) connecting the starting point and the endpoint of a trajectory. Assuming that atemporal uses of directional Ps determine that the path merely preserves a linear ordering (Zwarts & Winter 2000:29, Zwarts & Gärdenfors 2016), then the set of ordered vectors (path) may be a line of sight, a walking distance or, ultimately, the route for the *hypothetical* journey in (6)a. If correct, the path introduced by *hasta* would have an endpoint at the RO and a starting point at an unspecified location set by default at location of the speaker, yielding the '*from here*' entailment that accommodates the relevant condition ((6)a) and explains (7). The use of *hasta* over other directional Ps follows naturally: the projective direction ('up to' as opposed to *desde* 'from') imposes the correct ordering on the points connecting the path´s start/endpoint. The fact that *hasta* is a directional *boundary* P is also relevant to the endpoint interpretation that allows locative use (5). Note that DPs identifying a boundary in the landmark (*la punta, el límite* in (1)) stress the 'journey sense' ((1)a is understood as saying that you have to go through the *whole* town to find the house). Thus, while in standard locatives (e.g. *La casa está en el bosque* 'the house is in the woods), a *located vector u* $<w_0, w_1>$ determines the region within which the situation of the located object [LO] is framed, where w_0=location of the RO (the woods) and w_1=relative location of the LO *house* (Winter 2001), in the construction with *hasta* RO and LO coincide at w_1 (endpoint of *u*), thus leaving the additional (the contextually-fixed starting point noted by Cresswell) (w_0) as key variable yielding the relevant sense of distance. The difference is that in standard locatives w_0, w_1 are in the landmark, while with *hasta* w_0 is not. **Extensions.** The analysis allowed by (5) can be extended to non-spatial uses (2) where *hasta* marks the endpoint of a preparatory phase crucially involved. This non-standard use is crucially restricted to predicates allowing result interpretation (*Juan estará listo/*triste hasta las 3* 'Juan will be ready/*sad by 3'). **Conclusions**: *Hasta* imposes a locative condition on a path (endpoint) defined in terms of distance and direction. Non-standard use of Ps like *hasta* would represent an understudied strategy for grammatically realizing complex locative constructions with two key variables (distance and contextually-fixed starting point), something that has consequences on generalizations on how stative predicates can be constructed in natural languages, but also in understanding internal mechanisms of micro-variation in P alternations.

Argument realization patterns in Spanish: should we add a third variant to the causative-inchoative alternation?

M. Eugenia Mangialavori Rasia (CONICET)

The causative-inchoative alternation has been subject to extensive research in Romance languages (e.g. Labelle 1992, Folli 2002). Yet, a fact which is not commonly discussed is that the variability in the syntactic frame can be argued to extend to a third alternative, also related through the notion of *cause*. This overlooked variant features only one argument, a subject DP, which is interpreted by default as the entity with the relevant properties to instigate the change (i.e., the *initiator)*, as in ((1)c).

(1) a. La comida chatarra engorda a los niños. 'Junk food fattens the kids' *CAUSATIVE/TRANSITIVE*
b. Los niños engordan. 'The kids fatten [up]' *INCHOATIVE/UNACCUSATIVE*
c. La comida chatarra engorda. [Junk food fattens] 'Junk food is fattening' *SCC/UNERGATIVE*

This construction (called here stative causative construction [SCC]) creates a problem for the structural characterization of change-of-state verbs in at least two respects. (i) It raises the question as to whether the internal argument, which appears as a constant if the analysis is limited to the better-known frames ((1)a/b)), is a default constituent in the argument structure configuration of these verbs, as commonly assumed in lexicalist and constructional approaches (cf.(2)b). (ii) By suggesting that the causative component may be realized independently, SCCs challenge a basic rule of event composition, whereby the event structure of change-of-state verbs combines two basic components in a hierarchical relation, cause and process, and that the former, if present, implicates the latter (Hale & Keyser 1993:69, Ramchand 2008). **Analysis.** We argue that the possibility to derive SCCs can be explained by a (null) causative v^o freely available for derivation. Romance languages like Spanish would diverge from languages like English by allowing this causative v^o to combine directly with the (category-neutral) root, producing a simpler event and argument structure than the one seen in (a), but at the same time crucially different from the monoargumental frame in (b). Regardless of the specific implementation (e.g. v flavors: V_{INIT}, Ramchand 2008, McIntyre 2004; v_{CAUS}, Folli & Harley 2007), we work under the general hypothesis that the semantic properties of the verb heads (v^o) combined determine event interpretation and consequent argument structure realization, in line with earlier constructionist work going back to Hale & Keyser (1993). In this way, the transparent relation between event and argument structure is centrally preserved. In the discussion, three facts stand out:

•**No Null/implicit objects [NO]**. NO constructions offer a more traditional explanation for SCCs. Note, however, that NOs (2) generally allow (a) secondary predication, (b) subject-oriented depictives, and (c) AP modification, but SCCs do not (4). Unlike NOs, which arguably bind reflexive pronouns (Rizzi 1986 *i.a.*), SCCs do not allow reflexives (5). (6) shows that NO quantification is not possible in SCCs either. If the assumption that bare quantifiers ('*Bare molti*', Cattaneo 2008) behave as NOs is correct, (7) adds another relevant contrast. Importantly, verbs productively yielding SCCs like *enfurecer/infuriare* are unpassivizable. Data also discourages an explanation building on generic (null) internal arguments (available in Romance, Bhatt & Pancheva 2006, Dobrovie-Sorin 1994). Note that a generic internal argument shifts the interpretation to the eventive (change-of-state) type, yielding telicity, independently of object quantification (measure-out) (8); conversely, unergative frames remain invariably atelic, as suggested by the incompatibility with perfect tenses and endpoint modifiers (Dowty 1979, Borer 2003:35). This is consistent with (7): in both cases, the realization of the internal argument (even NO) strictly correlates with eventivity (and variable telicity). Resultative constructions, which are generally allowed by unaccusatives/transitives (Levin & Rappaport 1995:14), are not possible with SCCs (9). Also in this case, (9)a is only allowed under an undergoer (i.e., inchoative) reading of the sole DP or else if the internal argument is grammatically realized, namely, by an unaccusative (ergative) pronominal clitic like *se* (9)b. Ultimately, this helps to explain the patterns discussed above concerning secondary predication (2). Finally, Italian SCCs (10) do not allow ne-cliticization, a common test for unaccusatives and NO (Russi 2008:113, Borer 2003:37).

•**Unergative/Processless variant**. Major patterns indicate that telicity and duration are only possible if the internal argument is realized (transitive/unaccusative frames), not in SCCs (11). Progressive tenses and event modifiers are only allowed on an *undergoer* (conceptually odd) interpretation of

the DP (12). SCCs are also odd in perfective tenses (*El chocolate engordó* 'Chocolate fattened'). If allowed, this forces interpretation of the sole argument as *undergoer*. (A)-(B) support the idea that verbs defined as *bona fide* unaccusatives (Ramchand 2008:35, Levin&Rappaport 1995:80) or basic transitives (Levin 1993, Levin&Rappaport 1995:25) may appear in unergative frames. Unergativity in SCCs crucially correlates with absence of the corresponding eventive component ($_{PROC}$P).

(2) a. Proposed configuration: [$_{INIT}$vP [$_{INIT}$v^{o} √]] b. Standard: ([V_1P) [V_2P[$V_2{}^{o}$,√]]] (Hale & Keyser 2002); $V_{TRANSITIVE}$=CAUSE to $V_{INTRANSITIVE}$ (Levin 1993:27)

(3) a. El chef compra {empaquetado/barato}. 'The chef buys wrapped/cheap [items]'
b. El chef cocina {abundante/rico/salado}. 'The chef cooks abundant/tasty/salty [meals].
c. El viento arrastró las Ø más bajas. 'The wind cleared out the lowest (ones)'

(4) a. El horno calienta (*empaquetado/*abundante). 'The oven heats abundant/compact'
b. El viento sur despeja (*las Ø bajas). 'The southern wind clears out (the low [ones])'

(5) La injusticia {entristece/enoja} (*consigo mismo). 'Injustice saddens/maddens with oneself'

(6) El sol calienta *{todos/algunos}. cf. {Ví/Compré/Calenté} {todos/algunos}
'The sun heats up all/some'. 'I saw/bought/heated all/some [of them]'

(7) a. Questo ha reso/lasciato molti {infelici/poveri/indignati}. [Italian] *BARE MOLTI*
Esto ha dejado muchos {infelices/pobres/indignados} [Spanish]
'This has left many unhappy/poor/outraged'
b. Questo {infuria/impoverisce/indigna} *(molti). [Italian] *SCC*
Esto {enfurece/empobrece/indigna} *(muchos). [Spanish]
'This infuriates/impoverishes/outrages many'

(8) El sol quemó (en un minuto/completamente) *(algo/alguno). *UNACC*
'The sun burned *(some) in a minute/completely'

(9) a. El grafito calienta *(hasta quedar incandescente/fundido). *SCC*
'Graphite heats [causes heat] (until becoming incandescent/fluid)'
b. El grafito (se) calienta (hasta quedar incandescente/fundido). *UNACC*
'Graphite heats (itself) up until incandescent/fluid'

(10) La radiazione infrarossa (*ne) {riscalda/brucia}. 'Infrared radiation produces heat/burn'

(11) Estos payasos *(te) asustan (abruptamente/gradualmente/por un tiempo).
These clowns (you) scare (suddenly/gradually/for some time) `These clowns are scary'

(12) #El chocolate casi engorda/está engordando 'Chocolate almost gets fat/is fattening up'

• **Causative/Stative:** SCCs differ from stative predicates analyzed as the result of a causative v^{o} in previous works (e.g. English *Katherine fears nightmares*) in two ways. First, in SCCs the subject is interpreted by default as a *cause* or *trigger* rather than as *holder* of a result state (Ramchand 2008:64). Second, unergativity (which follows straightforwardly from the structural properties of causative v heads, characteristically licensing external arguments) is not predicted by the standard analysis, and contrasts with the argument realization patterns seen in English (X *fears/annoys* Y). SCCs show a configuration with the desired characteristics for a causative v^{o} (unergative, DP=initiator, stative).

In sum. SCCs point to a transparent event/argument structure relation (non-eventivity>unergativity), reinforcing the idea of an internal-argument-licensing process component not included by default in the configuration of the verb. This in contrast to an explanation building on implicit arguments and/or unrealized projections, not favored by empirical data, and is consistent with similar observations on atransitivity (cf. McIntyre 2004). **Advantages:** Stativity in SCCs is consonant with the stative nature of the causative v^{o} (Ramchand 2008). The constructional status of the internal-argument-licensing V^{o} matches the complexity of Romance unaccusative frames (Haspelmath 1993). Free combination with $_{CAUS}$v^{o} is consistent with the significantly fewer cases of change-of-state verbs lacking causative variants. The fact that the addition of the causative component seems only constrained by external semantic conditions agrees with observations raised by proponents of rather different views the topic (Harley & Noyer 2000, Hale & Keyser 2005; Rappaport & Levin 2011). If correct, SCCs allow us to test current hypotheses on verb phrase structure, offering a possibility to refine them accordingly.

Processing instruction: transfer of training into L3

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Processing Instruction (PI), guided by the model of Input Processing (IP) (VanPatten 2004), has been found to effectively help learners process those aspects of second language (L2) grammar that IP deems problematic during comprehension. PI has convincingly demonstrated its role in facilitating the creation of form-meaning connections for morphosyntactic information in a number of target languages including English, German, French, Spanish, Italian, and Russian, among others. As such PI provides a grammatically richer intake for the learners and enhances their developing system. While research results consistently show the generalisability of PI in various L1-L2 combinations, thus far, PI has failed to consider the processing of L3 grammar, an area of research which has attracted growing interest in the past decade. The PI studies which considered language background as a variable did not consider specific language pairings and mixed learners of various linguistic backgrounds, hence no conclusions can be drawn with respect to the effectiveness of PI on processing a specific L3 structure.

The area that has received increasing interest within generative framework pertains to the source of linguistic transfer in L3 morphosyntax (De Bot & Jaensch 2013; Flynn et al. 2004; Jaensch 2013). Current literature provides convincing evidence for typology as a key factor in affecting transfer between linguistic systems. Additionally, the Typological Proximity Model (Rothman 2015) has provided a theoretical framework to test the potential role of typology in L3 morphosyntactic processing which has been boosted by empirical findings, mainly on Romance languages. Since language typology is a key factor motivating L3 morphosyntactic transfer, it should be considered as a potential factor affecting transfer to L3 in the PI framework. PI literature reports transfer-of-training (TOT) effects where L2 learners who received PI training improved the processing of not only the target structure itself but also other structures affected by the principles in the IP model. In a seminal study on TOT effects, Benati and Lee with Houghton (2008) provided L2 English learners with PI training on past tense verbal morphology and found that the training also affected learners' processing of present simple verbal morphology, both affected by the LPP. Transfer-of-training effects provide an exciting avenue to test PI effects not only in L2 but also in L3.

The present experiment is designed to investigate the possibility that within Processing Instruction, typology will also affect transfer-of-training from L2 to L3. Therefore, in a pretest-posttest design, L1 Polish learners of L2 English and L3 German were randomly assigned to experimental and control groups whereby learners in the experimental group underwent PI training on past tense verbal morphology in English while learners in the control group did not. Assessment measures consisted of a battery of sentence-level tasks (interpretation and production): the target structure i.e. verbal morphology in L2 English and its typological equivalent in L3 German. RM ANOVAs have been performed to check improvement over time in order to answer the following research questions:

1. Does processing instruction change the effectiveness of learners' processing of morphosyntactic information in L2 English, as measured in sentence interpretation and production tasks?
2. Does typological proximity between verbal morphology in L2 English and L3 German facilitate transfer of training effects from L2 to L3 within processing instruction, as measured in sentence interpretation and production tasks?

The results of this research inform classroom practice. As this research delves deeper into the nuances of processing L3, it offers practical answers to questions raised in the classroom context.

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Talking brains, exhibiting language

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Once upon a time, in the middle of a great economic crisis in Spain, some then recently graduated linguists from Barcelona started looking for a way out of the lack of jobs and prospects. In a desolate academic landscape in which many existing positions were being laid off, and no new ones were being created, our heroes came up with an idea for something to do: an exhibition about the faculty of language as a common human property rooted in the shared biology of our species-specific brain, and a basis for our species-specific mind. Such a perspective had surprisingly received little attention in the museum landscape of the world, and among the many language museums and brain exhibitions, they thought it might have a unique and pioneering status. So they sought alliances, and crafted and designed an exhibition where the human linguistic brain would be presented by means of themes like its language-related parts, its evolutionary path across species, its development in infancy, its capability to process languages on a millisecond by millisecond basis, or the consequences the disintegration of language has for the composure of our minds. The project grew up over time and became a very ambitious creature named Talking Brains, in which emphasis on interactivity, a personalized approach to the visitor, and the use of top-notch technology served the aesthetic and emotional mission of translating scientific knowledge into experience. And you know what happened? In this talk, I'll explain the rest of the story.

Is It the Thought that Counts? – 'Meaning' and the Speaker Intention

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As a cultural construct, linguistic expressions reflect factors which are considered significant in the society in which it is used. Japan used to have a fairly rigid hierarchical class system based on profession until about 150 years ago. Consequently, the language has a fairly large number of expressions to convey politeness which is collectively called honorifics.

Levinson (1983: 90) states that '[relational honorifics] is the most important' and explains that there are three sub-types: referent, addressee and bystander (or audience) honorifics. Whether Japanese has bystander honorifics is arguable, and as its addressee honorifics is rather simple, I shall focus on referent honorifics, which can further be divided into two types: subject-referent and non-subject referent honorifics. For instance, *taberu* 'eat' has two subject-referent honorific forms: *otabeninaru*, which is created through a regular morphological process and *meshiagaru*, a suppletive form. It addition, it also has a non-subject-referent honorific form: *itadaku*, a suppletive form which can also be interpreted as a non-subject honorific form of *morau* 'receive'. Thus, if one wants to ask someone higher in the social hierarchy to have eat, then one should say

(1) Meshiagatte-kudasai.
eat [SUBJ-HON]-please 'Please eat (this).'

These days, however, because the society has become less hierarchical, many speakers of Japanese are inexperienced with respect to the use of honorifics and they are unsure as to which form should be used. Consequently, the following 'error' can be often heard:

(2) Itadaite-kudasai.
eat [NON-SUBJ-HON]-please 'Please eat (this).' [intended]

As (2) contains the non-subject honorific form of 'eat', it would literally convey politeness or respect towards a non-subject, which typically is understood to be the speaker, which is not at all acceptable. Many speakers do not explicitly object to the use of (2) and similar expressions, however, because they themselves are also unsure as to which form should be used and/or they would 'infer' the speaker's intention to be polite despite the apparent mistake.

Nevertheless, (2) and similar expressions can cause offence because it is impolite to the hearer who would be demoted in the social hierarchy as a result of the speaker being exalted. On the other hand, if the number of speakers who use 'wrong' forms such as (2) increases, it may result in the simplification of honorifics. As many speakers are not sure about which form to be used in which situation anyway, wouldn't it be best to have a single simpler form to express politeness, regardless of its target?

This paper will examine how speaker intention may or may not affect the hearer's understanding of utterances. It will also consider a rather different case of hyper-politeness; some speakers use honorific expressions to talk about people who normally would not be considered to deserve respect: e.g. suspects. Both phenomena reflect uncertainty on the part of some speakers about the 'correct' usage and may be helpful in predicting language change.

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Not all experientials are perfect

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(joint work with Sihwei Chen, Hotze Rullmann and Jozina Vander Klok)

Overview. Temporal operators which convey 'experiential' interpretations are typically analyzed as perfect aspects. We argue here that experiential operators can be either aspects or tenses, and that there are predictable differences between the two types. Our evidence comes from original fieldwork data on two Austronesian languages, Atayal and Javanese.

The question. Two salient interpretations of (present) perfects in languages like English are *resultative* and *experiential.* In the following examples (adapted from Mittwoch 2008), (1) leads to the inference that the license is currently at home, while (2) merely asserts that it has been left at home at some point in the speaker's life.

(1) *Policeman*: Can I see your license please? *Driver*: I've left it at home. RESULTATIVE
(2) I've left my license at home before. EXPERIENTIAL

This existence of these two interpretations invites the question of whether languages exist with a purely experiential category, and whether any such experiential elements must always be a type of perfect aspect. In Dahl's (1985) typological study, he classifies eight languages as having purely experiential categories. According to Dahl, experientials are 'closely related to' perfects, but it is 'not self-evident' that experientials are a sub-type of the perfect.

The data. We investigate the functional morphemes *-in-* in Atayal (Formosan) and *tau* in Javanese (Western Malayo-Polynesian); the latter language appears in Dahl's sample and he classifies the Javanese morpheme as experiential. Both these markers have dominant experiential readings (3), and lack resultative readings (4) (data are provided in either language here, but the facts are parallel for both):

(3) Sampean **tau** menek gunung Merapi toh? (Javanese)
2SG TAU climb mountain Merapi FOC
'Have you ever climbed Mount Merapi?' EXPERIENTIAL

(4) *Context: Describe to your friend how you lost your watch and found it.*
m-<**in**>gzyuwaw tuki=maku'. (Atayal)
AV-<IN>lost watch=1S.GEN
'My watch got lost.' **NOT** RESULTATIVE

Despite prototypically appearing in experiential contexts, *-in-* and *tau* lack almost all other characteristics of English (present) perfects. They lack a current relevance requirement, they lack 'lifetime' effects (5), and they are compatible with definite past-time adverbials (6).

(5) Columbus **tau** nemok-no Amerika. (Javanese)
Columbus TAU AV.find-APPL America
'Columbus found America. (cf. # Columbus has found America.)

(6) T<m><**n**>ubun **sa** **qutux** **spung** qu Tali'. (Atayal)
doze<AV><IN> LOC one o'clock ABS Tali'
'Tali' dozed off at one o'clock.' (cf. # Tali' has dozed off at one o'clock.)

Analysis. We argue that *-in-* and *tau* are existential past tenses (Ogihara 1996, von Stechow 2009, Mucha 2016). The times over which they quantify are domain-restricted (via the C variable in (7)), and their *t* argument is saturated by the most contextually salient time.

(7) [[-□□-/□□□]] = $\lambda C_{<i,st>} \lambda P_{<i,st>} \lambda t \lambda w \exists t' [t' < t \ \& \ C(t') \ \& \ P(t')(w)]$

Our analysis predicts that *-in-/tau* should contrast both with non-quantificational past tenses (tenses analyzed as pronouns with presuppositional features; Heim 1994, Kratzer 1998), and with present perfects.

Distinguishing existential past tense from pronominal past tense. *-in-/tau* are unacceptable in contexts which support non-quantificational analyses of past tense, including in narrative progression contexts; this effect is similar to the avoidance of non-specific indefinites in anaphoric contexts in the nominal domain (cf. Mittwoch 2008). For similar reasons they are also unacceptable in Partee's (1973) 'turning off the stove' contexts which involve a salient reference time. Our analysis of *-in-/tau* as existential relative pasts also correctly predicts that they have obligatorily backshifted interpretations in embedded clauses (Sharvit 2003).

Distinguishing existential past tense from present perfect. In Reichenbach's (1947) original conception, present perfects differ from past tenses in the location of the Reference Time: present perfects place an event before a current RT, while past tenses place RT before the Utterance Time (or before another salient time in the case of relative tense). In line with this, most formal analyses aim to derive the special pragmatic properties of the present perfect from the fact that present perfects contain a present tense, or from competition between this form and simple past (Portner 2003, Schaden 2009 a.o.). If this is correct, then *-in-/tau* should differ from present perfects in lacking those special pragmatic properties (lifetime effects, etc.) – which is exactly what we saw above.

Consequences. We have seen that *-in-/tau* look, at first glance, like purely experiential perfects, yet are better analyzed as existential relative past tenses which place RT before a salient time. We extend this to the general proposal that 'experiential' readings are simply the result of an existential temporal operator. This can be either an aspect (as in English) or a tense (as in Atayal and Javanese). Aspect- vs. tense-experientials differ in ways predicted by a Reichenbachian analysis, and additional specific properties may depend on a language's overall inventory of tense/aspect forms. For example, *-in-/tau* give rise to cessation effects with statives, as shown in (8). This follows because *-in-/tau* are past tenses in competition with a (phonologically null) pronominal tense, which by default/out of the blue is interpreted as referring to UT.

(8) Bu Siti **tau** lemu. (Javanese)
Mrs. Siti TAU fat
'Mrs. Siti was fat.' (strongly implies that she is no longer fat)

In the final part of the talk, we examine the predictions of our account for St'át'imcets (Salish). We show that the St'át'imcets auxiliary *plan,* which has previously defied analysis due to its semi-perfect-like behaviour (Matthewson 2013), is also analyzable as an existential past tense.

SE-passives and implicit arguments: the case of Aromanian

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Introduction: Romance languages have both analytic (BE-) and synthetic (SE-) passives. Contrary to BE-passives, SE-passives are only possible with 3rd person, impose severe restrictions on or totally block *by-phrases*, and may have non-passive readings. Aromanian SE-passives share properties with the rest of Romance, however they allow *by-phrases* introducing definite/specific agents. In this paper, I will argue that the availability of *by-phrases* in Aromanian SE-passives is related to the nature of implicit agents, which are φs and therefore fail to behave like proper arguments in various respects, including agent theta-role saturation (all data reported here were collected via fieldwork *in loco* in Greece).

Aromanian SE-passives & *by-phrases*: (a) SE-passives constitute the only strategy available for verbal eventive passives in Aromanian, BE-passives being resultative adjectival constructions (cf. that BE-passives block SE, trigger participle agreement and only allow modification of a result state (1a), as opposed to SE-passives (1b)):

(1) a. usha /tasturlu (*SE) easte diskljisə /diskljisu mata (di Lena)
door.the.fem /bag.the.masc (*SE) is opened.fem /opened.masc again (by Lena)
'The door/ the bag is opened (by Lena) again.' [BE again]

b. usha /tasturlu *(SE) are diskljisə /*diskljisu mata (di Lena)
door.the.fem /bag.the.masc *(SE) has opened.fem /*opened.masc again (by Lena)
'The door/the bag has been opened again (by Lena).' [CAUSE/BECOME again; BE again]

(b) SE-passives involve an (implicit) agent (2a), on a par with reflexives (2b) and (dispositional) middles (2c), and unlike anti-causatives (2d):

(2) a. tasturlu z-guli (di noi) ta z -bɨgəmu strɨnji nəuntru
bag.the SE-emptied.3sg (by us) for subj put.1pl clothes inside
'The bag was emptied in order to put clothes inside.'

b. jani se sursi ta si z -dukə la bɨsearikə
John SE -shaved.3sg for subj SE-go.3sg to church
'John shaved in order to go the church.'

c. γiarna lemnulu s -talje epitiδes ta s - aprində foku si ngɨltzaskə
winter.the wood.the SE-cut.3sg on.purpose for subj light.3pl fire subj heat.3pl
'In the winter, wood is cut on purpose so that people light up fires to heat themselves.'

d. *laptele si ngɨltzə ta z -lu da a njiklui
milk.the SE heated.3sg for subj 3sg.masc.cl give.3sg a.little.one.the.dat
'*The milk got heated up in order to give it to the baby.'

(c) Like the rest of Romance, Aromanian SE-passives are (normally) restricted to 3rd person (3a-b), and are productive (i.e. any transitive verb may in principle passivise) (3c-d). However, they allow definite/specific *by-phrases* (3a, c, d), unlike other Romance languages:

(3) a. kasa atsea se adrə di pɨrintslji ale lene
house.the this SE built.3sg by parents.the a.the lene
'This house was built by Lena's parents.'

b. ??me mushkai di doi kɨnji di unə parte de alantə
ME bit.1sg by two dogs of one place of other
'I was bitten by two dogs at different spots (in my body).'

c. albulu kalu si aleapse di jani ta z -lu da δoru ale marie
white.the horse SE chose.3sg by John for subj 3sg.masc.cl give.3sg present a.the marie
'The white horse was picked by John in order to give it to Mary as a present.'

d. laptele se arɨtsi di mumə ta z -lu da a njiklui
milk.the SE cooled.3sg by mother for subj 3sg.masc.cl give.3sg a little.one.the.dat
'The milk was cooled by the mother in order to give it to the baby.'

Assumptions: I assume the following structure for SE-passives (4) [$_{TP}$ T [$_{VoiceP}$ *pro*$_{agent}$ [$_{Voice'}$ Voice [$_{vp}$ v' [DP$_{theme}$]]]]] (see e.g. MacDonald 2016; Schäfer 2015). The presence of *pro* in spec,VoiceP accounts for the availability of inalienable possession (5a), contrary to anticausatives (5b) (and BE-passives, in languages that have them - see MacDonald 2016):

(5) a. ðaskalu ntribə nəshte. Se skularə mɨnile
teacher.the asked.3sg something SE raised.3pl hands.the
'The teacher asked something. The hands (of the students) were raised (by the students).'
b. (ɨlj) se arushɨrə fɨtsile
(3sg.fem.dat.cl) SE reddened.3pl faces.the
'Her face got red (her = the doll's, if dative possessor clitic is not present)

SE is an expletive element located in Voice, where it saturates its accusative feature – cf. (6) (see also Dobrovie-Sorin 2005; Marelj & Reuland 2016), while *pro* lacks person, and it behaves as an existentially bound variable (see e.g. Roberts 1985):

(6) kasa ale marie (*u) se surpə aeri
house.the a.the marie (*her.cl) SE knocked.down.3sg yesterday
'Mary's house was knocked down yesterday.'

***By-phrases* and true clitic doubling**: There seems to be a correlation between the (non-) availability of true clitic doubling and the (non-)availability of *by-phrases* in SE-passives. E.g. Italian and French lack true clitic doubling and also block *by-phrases* in SE-passives. On the other hand, Aromanian has true clitic doubling (see possessor extraction facts in (7)), and also allows *by-phrases*:

(7) *[ale marie]$_i$ fudzishɨ [afu kumpərashɨ fustanea t$_i$]//[ale marie]$_i$ lu vidzushɨ [ftshiorlu t$_i$]
[a.the marie] left.2sg [after bought.2sg dress.the] //[a.the marie] him.cl saw.2sg [son.the]
'You left after you bought Mary's dress.'// 'You saw him Mary's son.'

If true clitic doubling involves two elements sharing a single theta-role, we can extend this analysis to SE-passives: the *by-phrase*, when present, shares the agent theta-role with *pro*.

By-phrases* and the nature of the implicit agent/*pro: what underlies the correlation between true clitic doubling and the availability of *by-phrases* is the morpho-syntactic nature of *pro* (or the clitic, in case of direct object clitic doubling): *pro*$_{agent}$ is a weak implicit argument (in the sense of Landau 2010), namely a φ or expletive D (cf. that it blocks secondary predication (8a) and fails to bind a possessive dative anaphor (8b-c)):

(8) a. lena$_i$ s -ciptinə di marie$_j$ xuljisitə$_{i/*j}$
lena SE-combed.3sg by Mary angry.fem
'Lena was combed by Mary angry.'
b. pro$_i$ shə$_i$ surpə greblu
pro 3sg.dat.refl.cl knocked.down.3sg wall.the
'He/she knocked down his/her own wall.'
c. (alu jani)$_i$ lji$_i$ /*shə$_j$ pro$_j$ se surpə greblu (di ɨrγatslji$_j$)
(a.the John)him.dat.cl/him.dat.refl.cl pro$_i$ SE knocked.down.3sg wall.the (by builders.the)
'His wall was knocked down (on John) (by the builders).'

Not being a true argument (as only (non-expletive) DPs are arguments), *pro*$_{agent}$ does not saturate the agent theta role, which is either existentially bound (if there is no *by-phrase*), or is saturated by the *by-phrase* (see Legate 2014; MacDonald 2016 for a similar analysis, and Schäfer 2015 for the same intuition, albeit within a different framework).

Predictions: this analysis makes two predictions, (i) *by-phrases* should be allowed in other true clitic doubling languages with a φ *pro*$_{agent}$. This is confirmed for Romanian (see Cornilescu & Nicolae 2015; MacDonald & Maddox 2017) and possibly for Spanish (see MacDonald 2016), as well as for Greek, Albanian & Bulgarian medio-passives; (ii) a SE-passive with a φ *pro* should be able to be reanalysed as a true medio-passive (where no spec is projected – see Schäfer 2015). This, in fact, is confirmed for Aromanian by heritage and Greek-dominant

speakers whose SE-passives behave like Greek medio-passives (lexical gaps, non-productivity, *by-phrases*, multiple meanings).

Vowel nasalisation in Scottish Gaelic:
The search for paradigm uniformity effects in fine-grained phonetic detail

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According to the modular feedforward architecture of grammar, the phonetic component is sensitive only to the output of the phonology and is thus blind to morphological or lexical conditioning (Pierrehumbert 2002). However, this prediction is challenged by claims that fine-grained phonetic detail may display e.g. paradigm uniformity effects (Steriade 2000) or lexical frequency effects (Bybee 2001). In the present study I begin the search for potential paradigm uniformity effects on vowel nasalisation in Scottish Gaelic by investigating alternating items in which a nasalising environment is removed by a morpho(phono)logical process. A clear distinction is found between categorical phonological nasalisation, which is "carried over" into derived forms, and gradient phonetic nasalisation, which is eliminated completely when the triggering environment is removed. This is consistent with the predictions of the modular architecture.

Studies claiming to find evidence of morphologically conditioned phonetics sometimes overlook the fact that a modular architecture may allow prosody to mediate between morphology and phonetics, thus granting the phonetics indirect access to morphological structure. For instance, the subtly differing degrees of /l/-darkening and GOOSE-(non-)fronting found by Strycharczuk & Scobbie (2016) between morphologically simplex *hula* and morphologically complex *fooling* are compatible with an analysis in which *-ing* is adjoined directly to the prosodic word, à la Bermúdez-Otero (2011: 2028), resulting in distinct prosodic structures in *fooling* vs. *hula*. Ideally, the search for morphologically conditioned phonetics must therefore focus on processes which do not involve overt segmental affixation, thus ruling out prosody as a confounding factor.

In the Lewis dialect of Scottish Gaelic, vowels are usually nasalised after initial [m], e.g. *madainn* [mãtiɴʲ] 'morning', but this appears to be blocked in some exceptional items such as *marag* [marak] 'pudding'. The existence in Lewis Gaelic of items of the latter type was not noted by Borgstrøm (1940) but was observed by Oftedal (1956), and has since been reported for other dialects (e.g. Ternes 1973, Ross-shire). Positive confirmation is provided by my own observations of Lewis Gaelic.

Using a nasal airflow mask, I carry out a preliminary investigation of patterns of nasal airflow in one 62-year-old native speaker from Ness in the north of Lewis. Stimuli were presented in a word list and the speaker read each aloud within a carrier sentence three times in succession. This procedure was repeated twelve times overall, using a different randomisation of the word list each time, resulting in 36 tokens of each target word. By averaging across all tokens of each stimulus I obtain highly detailed dynamic nasality profiles of a number of items (*see* Fig. 1). It is found that all items in initial [m] display a high level of nasal airflow early in the vowel; however, in items such as *madainn* a moderately high level is sustained throughout the remainder of the vowel, while in items such as *marag* it rapidly decreases to zero. This suggests two *scattered* (Bermúdez-Otero 2007) nasalisation processes: one categorical phonological process which may be subject to lexically conditioned blocking, and, superimposed upon this, another more subtle gradient phonetic process which applies without exception.

Scottish Gaelic, like all living Celtic languages, displays morphosyntactically conditioned alternations in initial consonants known as *initial mutations*. Under the *lenition* mutation, *radical* initial [m] alternates with *lenited* initial [v]. It is a matter of great debate whether the Celtic initial mutations involve autosegmental affixation in the phonology (Lieber 1987; Wolf 2007; Iosad 2014) or are "pure" morphology (Green 2006; Hannahs 2013), but nevertheless it

is clear that the radical and lenited grades of a given lexical item are paradigmatically related to one another. In this study it is found (*see* Fig. 1) that items with categorical phonological nasalisation after radical [m] (*madainn*) also display categorical phonological nasalisation after [v] in the lenited grade (note that some nasalisation is also present on the consonant itself); crucially, however, those items with only gradient phonetic nasalisation after radical [m] (*marag*) display no nasalisation in the lenited grade. Thus while categorical phonological properties of the radical grade can be "carried over" into the lenited grade, the fine-grained phonetic detail of lenited forms is seen to display no sensitivity to the fine-grained phonetic detail of their radical counterparts.

These results are fully consistent with a modular architecture in which the phonetic component has no direct access to morphological information. I take this as evidence that dismissal of the modular architecture is premature and I claim that the search for paradigm uniformity effects in fine-grained phonetic detail should be restricted to cases where prosodic structure cannot play any mediating role, as exemplified here by the lenition mutation in Scottish Gaelic.

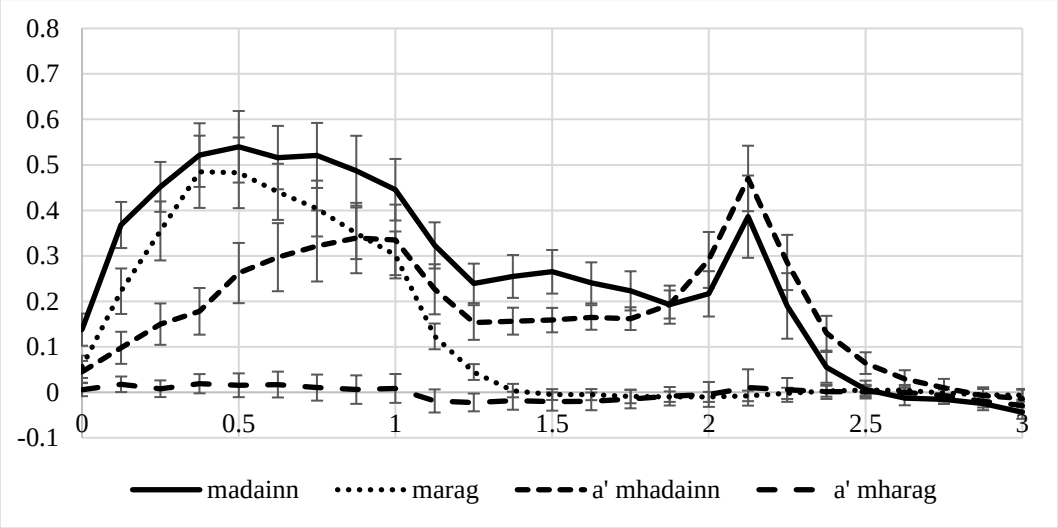

Fig. 1: A provisional comparative plot of the dynamic nasality profiles of the underlined portions of madainn [mãtiɴʲ] *'morning',* marag [marak] *'pudding',* a' mhadainn [əˈvãtiɴʲ] *'the morning' and* a' mharag [əˈvarak] *'the pudding'. The* x*-axis represents normalised time, where 0-1 is the duration of the consonant* [m ~ v]*, 1-2 is the duration of the vowel* [ã ~ a]*, and 2-3 is the duration of the consonant* [t ~ r]*; measurements were taken at one-eighth intervals throughout the duration of each segment. The scale on the* y*-axis represents an analogue of nasal airflow rate. Error bars represent the 95% confidence interval.*

Cumulative Existential Disclosure

Takanobu Nakamura (Sophia University)

Overview It has been said that event semantics does not get along with quantification without a rule of Quantifier Raising (QR). In this paper, I refute this view, proposing *Cumulative Existential Disclosure* (CED). Consequently, the proposed account necessitates neither covert pluralizing operator (*-operator) nor *Lexical Cumulativity Hypothesis* (LCH).

Proposal I adopt two assumptions. First, I adopt Kratzerian verbal denotation: lexical verbs denote a relation of events and individuals and agent role is introduced by *v* head as in (1).

(1)a. [[verb]] = $\lambda x\, \lambda e$ [verb (e) & theme (e, x)] b. [[v]] = $\lambda y\, \lambda e'$ [agent (e, y)]

Second, I assume verbs and *v* is linked via *Event Identification* (EI), defined as in (2).

(2)Event Identification: If X consists of two daughter nodes, Y and Z, and Y is of type <e, vt>, while Z is of type <v, t>, then [[X]] = [$\lambda x.\, \lambda e.$ [[Z]](e) & [[Y]](x)(e)]. (Cable 2014: 582(47))

Then, I propose an operation of *Cumulative Existential Disclosure* (cf. Dekker's (1993) *Existential Disclosure*) as defined in (3).

(3)Cumulative Existential Disclosure (CED): λx [ϕ] $\stackrel{\text{def}}{=}$ $\lambda x'$ [$\phi \wedge x' = \Sigma x$]

Σx is defined as a mereological fusion of any entity in the discourse which satisfies x. In (3), derived predicate $\lambda x'$ is true of a plural individual which is a fusion of every entity which satisfies x. Compare (3) with LHC, which states every simple predicate in natural language meets (4).

(4)Cumulativity Condition: For any entities x_1, x_2, . . . , x_n, y_1, y_2, … , y_n, if $P(x_1)$ … (x_n) = 1 and $P(y_1)$ … (y_n) = 1, then P($x_1 \oplus y_1$) … ($x_n \oplus y_n$) = 1 (Cable 2014: 580)

Incorporating (4), (5b) expresses collective, distributive, cumulative and repetitive reading of (5a).

(5)a. Two students lifted three boxes.

b. $\exists x\, \exists y\, \exists e$ [*student (x) & /x/ = 2 & *box (y) & /y/ = 3 & *agent (e)(x) & *lift (e)(y)]

Kratzer (2013) adopts LHC and, in addition, argues that the distribution of *-operator is restricted to the sister predicate of a plural DP. On the other hand, in my account, cumulativity arises only when CED applies and every simple predicate in natural language satisfies only an atomic entity. Moreover, as CED provides a plural predicate only when there are more than one entities which satisfy a variable, the distribution of phrasal plurality is almost the same with that of Kratzer's (2013) theory.

Taming CED No restriction on CED leads to overgeneration. Here, I argue that the application of CED proceed in parallel with the activation of syntactic *phase*. Specifically, I suggest (6).

(6)a. *Phase* is activated by some designated phase heads (*i.e.*, *v*, C and possibly D).

b. The sister constituent of a given phase head is sent to the semantic component when the phase head is merged and if there are unsaturated variable, *Existential Closure* (EC) applies to it.

c. CED applies to a variable which is quantified or existentially closured at the immediately previous phase when the next phase head is activated.

d. EC at the semantic component does not effect to constituents within any other phase.

For example, (7) is a denotation of VP. As VP is the sister of *v*, EC applies to it as in (8).

(7)λe [verb (e) & theme (e, DO)] (8)$\exists e$ [verb (e) & theme (e, DO)]

As EC applies to *e*, CED applies to *e* when C is merged.

(9)$\lambda e'$ [$\exists e$ [verb (e) & theme (e, DO)] & $e' = \Sigma e$]

This setting well explains the clause-boundedness of scope dependency. As CED targets a variable iff EC applies to the variable within the immediately previous phase and phase heads are *v* and C, the effect of CED is always restricted to a clause. On this point, I argue that the prediction of this proposal is stronger than that of QR. Indeed, clause-boundedness of QR is somewhat weird, considering wh-movement at LF is not island sensitive (*e.g.*, Huang 1982). Even if QR qualifies as a special LF-movement, it is still problematic that QR is not island-sensitive but clause-bound.

'Every' and distributivity Then, consider cases of English 'every'.

(10)a. Every student read a book. b. A student read every book.

On this point, I assume unorthodox denotation of 'every' as follows.

(11)[[every]] = $\lambda P\, \Sigma x$: P (x)

In (11), distributivity is not inherent to 'every', rather semantic composition brings about it. This kind of denotation is independently motivated by the non-distributive construals of 'every'.

(12)a. In this class, I try to combine every/#each theory of plurality. (Landman 2000)
b. I took every/*each boy to lift the piano. (Beghelli and Stowell 1997)

In addition, I assume the interpretation of indefinites involves (*Skolemized*) *Choice function* (CF).

(13)A function f of type $\langle e, e\rangle$ is a choice function iff $f(X)$ is an atomic part of X for all X. (Sudo 2014)

Then, semantic composition proceeds in the case of (11a), as follows. I assume a basic composition rule as *Function Application* (FA) (cf. Heim and Kratzer 1998).

(14)(i) $\lambda e\,[f(x)$ & book (x) & read (e) & theme $(e, x)]$ (FA)
(ii) $\exists e\,[f(x)$ & book (x) & read (e) & theme $(e, x)]$ (EC)
(iii) $\lambda e'\,[\exists e\,[f(x)$ & book (x) & read (e) & theme $(e, x)]$ & $e' = \Sigma e]$ (CED)
(iv) $\lambda y\,\lambda e'\,[\exists e\,[f(x)$ & book (x) & read (e) & theme $(e, x)]$ & $e' = \Sigma e$ & agent $(e', y)]$ (EI)
(v) $\lambda e'\,[\exists e\,[f(x)$ & book (x) & read (e) & theme $(e, x)]$ & $e' = \Sigma e$ & agent $(e', \Sigma y$: student $(y))]$ (FA)
(vi) $\exists e'\,[\exists e\,[f(x)$ & book (x) & read (e) & theme $(e, x)]$ & $e' = \Sigma e$ & agent $(e', \Sigma y$: student $(y))$ (EC)

For an explanatory reason, I postpone discussing f for a while. As CED target the sister of a phase head, CED applies at (14iii). As I do not adopt LCH, e and x are satisfied only by an atomic entity. Plural predicate arises only when CED applies to a quantified variable. Next, consider (11b).

(15)(i) λe [read (e) & theme $(e, \Sigma x$: book $(x))]$ (FA)
(ii) $\exists e$ [read (e) & theme $(e, \Sigma x$: book $(x))]$ (EC)
(iii) $\lambda e'$[$\exists e$ [read (e) & theme $(e, \Sigma x$: book $(x))]$ & $e' = \Sigma e]$ (CED)
(iv) $\lambda y\,\lambda e'\,[\exists e$ [read (e) & theme $(e, \Sigma x$: book $(x))]$ & $e' = \Sigma e$ & agent $(e', y)]$ (EI)
(iv) $\lambda e'\,[\exists e$ [read (e) & theme $(e, \Sigma x$: book $(x))]$ & $e' = \Sigma e$ & agent (e', y) & $f(y)]$ (FA)
(v) $\exists e'\,[\exists e$ [read (e) & theme $(e, \Sigma x$: book $(x))]$ & $e' = \Sigma e$ & agent (e', y) & $f(y)]$ (EC)

So far, there is no problem concerning scope mechanism. How about inverse linking? CF plays a crucial role here. Following Reinhart (1997), I assume EC applies to f freely, to some extent. However, I argue that there are only two ways. One is to apply EC within the phase where an indefinite is merged. The other is to apply EC within the immediately next phase, *e.g.*, if 'a book' is a direct object, EC applies either within *v* phase or C phase. If 'a book' is closed at *v* phase, this has no scope dependency and show long distance side scope reading, according to (7d). On the contrary, if 'a book' is closed at C phase, it takes narrow scope with respect to the subject. So, division of labor between QR and CF in Reinhart (1997) is still maintained.

Further issues I have concentrated on the relative scope of 'every' and indefinites. Then, how about a sentence that involves more than one numerals? Though space limitations prevent the whole description of the analysis, I adopt Winter's (2000) proposal, in which numerals are *flexible*, being rigidly quantificational or predicative. He attributes this flexibility to their position within DP. As simple numerals sit lower than DP Spec, their semantics is flexible. He further suggests that flexible one shows collectivity effect, takes wide scope reading across islands. In this paper, I argued that the sister constituent of a phase head is applied EC and CED. In other words, the specifier of the phase head (or *edge*) is applied nether EC nor CED at the phase. So, if D is also a phase head, Spec DP is not among the targets of EC and CED. It might be possible to incorporate Winter's (2000) flexible DP semantics into the proposed account of phase-based CED.

Conclusion In this paper, I proposed an operation of CED, which unites every event which satisfies a given variable and make them available for further modification. By using it, scope relation in event-based logical form is explained resorting neither QR nor *-operator. In addition, I suggested a phase-based restriction on the application of CED and it provides better account for clause-boundedness of scope relation than that of QR.

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Nasal harmony in Kamaiurá: Syllabification and spreading

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Kamaiurá is a Tupi–Guarani language spoken in the Upper Xingu region of Brazil. In her grammar of the language, Seki (2000) observes the presence and effects of nasal spreading but does not develop a formal analysis of the phenomenon. In this paper, I take an Optimality-Theoretic approach and, using Seki's data, show that nasal spreading in Kamaiurá is best interpreted as the regressive propagation of [+nasal] within the word which is blocked by any intervening segments that are specified as [-nasal] but not by all other segments (i.e. [+nasal] and segments unspecified for nasality). However, such spreading is initially only permitted if the source syllable contains a nasal nucleus or coda, but not onset.

In stressed syllables, Kamaiurá possesses contrastive oral and nasal vowels (ibid. 427) and the phonemes /ɾ/, /w/ and /j/ are nasalised in nasal environments, being realised as [ɾ̃], [w̃] and [ɲ] respectively (ibid. 412f). The spread of nasality is blocked by those segments specified as [-nasal]. There are no non-glottal fricatives in the language, though there is an affricate, namely /t͡s/, which is opaque to nasal spreading.

Following the example of work such as Walker (1995, 2003; see also references therein), the ranking of the constraint SPREAD(+nas) relative to those constraints which penalise the nasalisation of segments of different manners of articulation helps explain the observed facts of the language. In this case, those relevant anti-nasalisation constraints are *NASP(LOSIVE), *NASL(IQUID), *NASS(EMI)V(OWEL) and *NASV(OWEL). This is further refined by the ranking of the faithfulness constraints IDENT(son) and IDENT(nas), the first dominating SPREAD(+nas), the second being dominated by it. Implementations of these constraints, along with NOGAP, which penalises skipping over segments in the spreading of nasality, and ALIGN$^{\text{NAS}}$L, are given below in (1) and (2) with the examples /kujã/ 'mulher [woman]' and /akaŋ/ 'cabeça [head]'.

(1)	Input: /kujã/	NoGap	*NasP	Ident(son)	Spr(+nas)	Ident(nas)	Align$^{\text{Nas}}$L	*NasL	*NasSV	*NasV
	[kujã]				***!					*
	[kuɲã]				**!	*				*
☞	[kũɲã]				*	**			*	**
	[kũjã]	*!			**	*				**
	[k̃ũɲã]		*!			***			*	**
	[ŋũɲã]			*!		***			*	**

(2)	Input: /akaŋ/	NoGap	*NasP	Ident(son)	Spr(+nas)	Ident(nas)	Align$^{\text{Nas}}$L	*NasL	*NasSV	*NasV
	[akaŋ]				***!					
☞	[akãŋ]				**	*				*
	[ãkãŋ]	*!			*	**				**
	[ãk̃ãŋ]		*!			***				**
	[ãŋãŋ]			*!		***				**

As previously mentioned, an additional detail of nasal spreading in Kamaiurá is that it can be *initiated* only by a nasal nucleus or coda. The example in (3) demonstrates that spreading is not initiated by onsets.

(3) /pa.ɾa.na/ → [pa.ɾa.na] (*[pã.ɾ̃ã.na]) ‘rio [river]’

However, once it has begun, nasality may propagate leftwards out of the syllable until stopped by an opaque segment or word boundary, as shown in (4).

(4) /ka.wĩ/ → [kãw̃ĩ] (*[kaw̃ĩ]) ‘mingau [porridge]’

One might then expect that, upon the affixation of a vowel-initial suffix, nasal spreading caused by a word-final nasal would be prevented; however, this is not the case as resyllabification occurs *after* nasal spreading. This is illustrated in (5) below.

(5) /a.kaŋ-.e.te/ → a.kãŋ.e.te (*a.ka.ŋe.te) → [a.kã.ŋe.te] ‘cabeçudo [large headed]’

Furthermore, the second vowel in /akaŋ/ is shown to be underlyingly oral rather than nasal by the morphologically-induced deletion of the nasal coda and subsequent lack of nasal vowel.

Though this is a somewhat unusual pattern, a potential solution is to restrict the licensing of “spreadable” nasality to the syllable, giving the constraint LICENSE([+nasal], syllable), cf. Walker (1998) on rounding harmony in Altai.

In sum, the data from Kamaiurá discussed here add weight to the typology of the nasalisation hierarchy whilst also diverging slightly from the more commonly cited examples.

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Proximate Internal Possessors

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The goal of this paper is to contribute to the typology of obviation-sensitive languages, by analysing Tundra Nenets (TN), a Uralic language not previously discussed in this respect.

1 Data TN pronominal possessors always trigger possessive agreement on the possessed noun, but agreement with lexical possessors is optional, cf. *(pida) wāsako*(-da)* 's/he husband-3SG' and *Maša-h wāsako(-da)* 'Masha-GEN husband(-3SG)'. We call agreeing lexical possessors Prominent Internal Possessors (PIPs). The distribution of PIPs is more restricted than that of non-agreeing lexical possessors and pronominal (3rd person) possessors. PIPs cannot co-occur in the same clause with (i) 3rd person subjects, (1a), (ii) 3rd person agreeing objects, (2a,b), or (iii) any disjoint 3rd person pronouns, (2c).

(1) a. *Maša* [*Wera-h* *ti-m* / **te-m-ta*] *ladə°*.
Masha Wera-GEN reindeer-ACC reindeer-ACC-3SG hit.3SG
'Masha hit Wera's reindeer.'

b. *məń°* [*Wera-h* *ti-m* / *te-m-ta*] *ladə°-d°m.*
I Wera-GEN reindeer-ACC reindeer-ACC-3SG hit-1SG
'I hit Wera's reindeer.'

(2) a. *pidər°* [*Wera-h* *ńabako-m-ta*] *ńu°ćaə-n°* / **ńu°ćaə-r°*.
you.SG Wera-GEN sister-ACC-3SG kiss-2SG kiss-2SG>SG.OBJ
'You kissed Wera's sister.'

b. *pidər°* [*Wera-h* *ńabako-m*] *ńu°ćaə-n°* / *ńu°ćaə-r°*.
you.SG Wera-GEN sister-ACC kiss-2SG kiss-2SG>SG.OBJ
'You kissed Wera's sister.'

c. [*Peťa-h* *ńeka-m* / **ńeka-m-ta*] *ńanta* *ŋedaraə-d°m.*
Petya-GEN brother-ACC brother-ACC-3SG s/he.DAT send-PST.1SG
'I sent Peter's brother to him/her.'

2 Analysis Since only lexical possessors can be PIPs, they are by definition 3rd person. As (1)–(2) show, clause-level elements that block PIPs also have to be 3rd person. This suggests an analysis based on **obviation**, a grammatical phenomenon that regulates the co-occurrence of 3rd person elements in a given syntactic domain, the "obviation span" (usually a clause). In classical obviation systems, each 3rd person element has the relative status of *proximate* or *obviative*. Only one proximate is allowed per obviation span; if two (or more) 3rd person elements are proximate, they must be co-referent (Aissen 1997).

We propose that the 3rd.POSS suffix in TN shows a lexical split: with pronominal possessors, it marks agreement, but with PIPs, it is anaphoric and indicates the PIP's proximate status. Being specified as proximate, PIPs cannot co-occur with a disjoint proximate element in the clause. (3) shows possible mappings of grammatical functions onto proximate/obviative. In (3a), SBJ is [prox], and all other elements are [obv], cf. (2b)/the grammatical version of (1a). In (3b), SBJ is irrelevant, since obviation only targets 3rd person. The PIP is [prox], while OBJ/OBL are [obv], cf. (1b)/the grammatical version of (2a). (4) shows ungrammatical mappings, cf. (1a)/(2a)/(2c).

(3) a. [Proximate Obviative]
SBJ OBJ+AGR OBJ, OBL

b. [Proximate Obviative]
SBJ[1/2] PIP OBJ, OBL

(4) a. *[Proximate Obviative]
SBJ PIP

b. *[Proximate Obviative]
SBJ[1/2] OBJ+AGR / pron. PIP

These patterns indicate that different grammatical elements have different default values w.r.t. obviation. Aissen (1997) analyses similar patterns in Algonquian and Mayan using participant and relational hierarchies. On the former, [prox] outranks (>) [obv], and on the latter, SBJ > OBJ, OBJ > OBL etc. When two hierarchies are not aligned harmonically, i.e. [prox] OBJ — [obv] SBJ, ungrammaticality arises unless certain repair strategies are used (inverse in Algonquian, passive in Mayan). For TN, we propose that **PIPs participate in the relational hierarchy**, shown in (5).

(5) $\text{SBJ} > \left\{\begin{array}{l}\text{OBJ + AGR (agreeing object),}\\ \text{3rd non-SBJ pronoun}\end{array}\right\} > \textbf{PIP} > \text{OBJ, OBL}\ldots$

To be licensed, PIPs must not be outranked by elements that are higher in (5), such as 3rd person SBJ, OBJ+AGR or pronominal. In case of a conflict, the non-agreeing possessor must be used. But PIPs are compatible with lower-ranked elements, i.e. non-agreeing OBJ and non-pronominal OBL.

Supporting evidence for this status of PIPs comes from their behaviour in the clause. First, TN has syntactic strategies that repair ungrammatical mappings. For example, (6a), with a PIP co-referential to the object pronoun, entails that OBJ is proximate, while SBJ must be obviative, violating (5). This can be repaired by extraposing the lexical NP corresponding to the PIP, i.e. removing it from the obviation span (the clause), as in (6b).

(6) a. *[*Wera-h* *ńe°ka-da*] *śita* *ladə°*.
Wera-GEN brother-3SG s/he.ACC hit

b. *Wera-m,* *ńe°ka-da* *śita* *ladə°*.
Wera-**ACC** brother-3SG s/he.**ACC** hit
'Wera$_i$'s brother hit him$_i$.', lit. 'As for Wera, his brother hit him.'

Second, PIPs behave like **clause-level** elements w.r.t. certain anaphoric processes. For example, they can serve as antecedents for possessive anaphors. In (7a), the possessive pronoun *pida* must be free. With the PIP in (7b), the possessive pronoun *can* be co-referent with the possessor *Mašah*. Similar behaviour is typical of clause-level non-subject arguments in TN. The co-reference relations in (7b) also correspond to those in analogous structures in Ojibwe (Algonquian) and Tzotzil (Mayan) where a proximate subject is co-referent with a pronominal possessor (Aissen 1997: 713, 723). The fact that such co-reference only arises with PIPs in TN supports their proximate status.

(7) a. [*Maša-h* *wǣsako*] *(pida)* *xər°-m-ta* *xana°*.
Masha-GEN husband s/he knife-ACC-3SG take.3SG
'Masha$_i$'s husband$_j$ took his/her$_{*i/*j/k}$ knife.'

b. [*Maša-h* *wǣsako-**da***] *(pida)* *xər°-m-ta* *xana°*.
Masha-GEN husband-**3SG** s/he knife-ACC-3SG take.3SG
'Masha$_i$'s husband$_j$ took his/her$_{i/*j/k}$ knife.'

PIPs also pattern with clause-level elements in anaphoric relations across a clause boundary, but they are nevertheless DP-internal. We propose that this follows from their prominent position in the NP: PIPs are adjoined to DP, i.e. contained in but not dominated by DP (Chomsky 1995):

(8) [$_{\text{DP}}$ *Wera-h* [$_{\text{DP}}$ [$_{\text{D}}$ *ťuku°* [$_{\text{PossP}}$ *te-da*]]]] 'this reindeer of Wera's'
Wera-GEN this reindeer-3SG

3 Conclusions The distribution of 3rd person NPs in TN obeys the same general principles that explain obviation in Algonquian and Mayan (Aissen 1997). What makes TN special is that it does not have an inverse system but grammaticalises the proximate/obviative distinction in possessive DPs: a subset of possessors is marked as proximate and thus competes with other 3rd person clause-level elements. The clause-level syntactic properties of such possessors follow from their adjunction structure.

Middle Class Acquisition

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One of the most discussed puzzles in language acquisition is that children learning English (and a typologically diverse array of other languages) are delayed in acquiring adult comprehension of A(rgument)-movement structures like (1)-(2) until as late as 6 years old, but acquire others (3) early (cf. Orfitelli 2012 and references within). This discrepancy has inspired numerous explanations, including appeals to structural frequency (Demuth 1989), the non-canonical thematic alignment of passives (e.g. Fox and Grodzinsky 1998, Kirby 2009), and recently, intervention effects (Orfitelli 2012, Snyder and Hyams 2015), which suggest that structures like (1) violate locality restrictions on movement, making them impossible for young children to derive, while the sentences in (2) do not violate these restrictions.

(1) Amber was seen ~~Amber~~ by Graham. *verbal passive*
(2) Amber seems to Graham [to be ~~Amber~~ sleeping]. *subject-to-subject raising*
(3) Amber believes Graham [to be ~~Graham~~ lying]. *subject-to-object raising*

This paper presents data from three experimental studies on the acquisition of the A-movement involved in the middle voice (4), and a related structure with similar properties (5, cf Ahn and Sailor 2014). Both (4) and (5) are structurally ambiguous: the nominative subject may be interpreted as either the external argument (*reading i*) or internal argument (*reading ii*) of the predicate. The internal argument reading is of particular interest to an understanding of A-movement acquisition, as it presents a non-canonical thematic alignment, but does not violate locality restrictions on movement (Ackema and Schoorlemmer 2007, Ahn and Sailor 2014). Furthermore, the results of experiment 1, a CHILDES search of sentences like (4) and (5) in four British English corpora, reveals that the internal argument usage is even rarer in the input to children than verbal passives are.

(4) Kittens sell easily. *middle*
    i. Kittens are excellent sales-cats.
    ii. Kittens are easy to sell.
(5) Mad scientists make great monsters. "*make-middle"*
    i. Mad scientists create great monsters (a la Dr. Frankenstein).
    ii. Mad scientists become great monsters (a la Dr. Jekyll).

10 linguistically naïve adults and 60 English-acquiring children (mean age 5.4 years) participated in two truth-value judgement tasks (Crain and McKee 1985) investigating comprehension of sentences similar to (4) and (5). In one scenario testing sentences like (5), a handsome prince enjoys sculpting, but has no talent (Picture 1). One day, he sculpted a horribly ugly frog (Picture 2). The wicked witch saw this, and turned him into a frog too, but the prince was so handsome he became a very handsome frog. Following the story, the TVJT puppet shows the child either Picture 2 or 3, and utters a test item. The condition of interest is "In this part of the story…the prince makes a handsome/ugly frog" which can be applied to either Picture 2 or 3 with different interpretations. The adjective *ugly* would be the adult-like adjective for Picture 2, in which *the prince* is the external argument of *make*, while *handsome* is the adult-like adjective for Picture 3, in which it is the internal argument.

Picture 1

Picture 2

Picture 3

Based on logistic regressions with accuracy as the dependent variable and age and condition as fixed effects, neither age nor condition was found to be a significant predictor for either study. These results indicate that both adults and children readily permit both interpretations of the sentence. Thus, children allow the nominative DP to begin as an internal argument, despite the non-canonical alignment of this interpretation, and its extreme rarity in child-directed speech. Of the accounts considered here, only intervention – or the lack thereof – is consistent with the early comprehension of these structures, as compared to the late acquisition of verbal passives and subject-to-subject raising.

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Evaluating third factor effects in child comprehension

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The classic model of language acquisition in the generative tradition assumes a genetic endowment for language (Universal Grammar, UG) that interacts with primary linguistic data (PLD), leading to relatively rapid convergence with the target grammar. Domain general learning mechanisms outside of UG were often (although not exclusively) treated as being in opposition to this dyad, by generativists and non-generativists alike. Increasingly, however, generative linguistics is explicitly codifying domain general learning mechanisms as the 'third factor' (Chomsky 2005) in language acquisition, alongside UG and PLD.

This paper examines two such specific models, which differ both in the biases underpinning their domain general learning mechanisms, and in what UG is assumed to contain. The "efficient computation model" of Yang 2010 utilizes *UG-based* parameter setting, mediated by frequency and domain general computational mechanisms. Conversely, the "maximise minimal means model" of Biberauer 2016 links a relatively impoverished UG with a learning bias rooted in Saussurean arbitrariness, leading to an *emergent* parameter system.

One measurable difference between the two models lies in the amount of overgeneralization they predict. Biberauer's maximise minimal means model explicitly codifies overgeneralization as a step in language acquisition, while in Yang's efficient computation model it plays a much more limited (or even negligible) role. Although previous work has (directly or indirectly) examined these positions with regard to child production data (see Yang 2002, Biberauer et al 2009), less has been said regarding child language comprehension. This paper examines how distinct conceptions of the third factor might explain two known areas of comprehension difficulty: the null subject stage, in which English-acquiring children accept subjectless sentences (e.g. 1) as grammatical declaratives until approximately 3;6 (Orfitelli and Hyams 2012) and the acquisition of A-movement (e.g. verbal passives and subject-to-subject raising sentences with certain predicates, 2-3), with which children from a typologically diverse set of languages show non-adult comprehension until as late as 6;0.

(1) __ put on socks. *Null subject sentence*
(2) William was seen by Karen. *Verbal passive*
(3) Karen seems to William to be happy. *Subject-to-subject raising*

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When learnability and universals disagree: the case of phonological repetition

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In the past few decades, much research on the connection between language acquisition and linguistics has been driven by the notion that human language is shaped by learning biases that favour certain types of structures over others. A broad prediction that follows from this idea is that linguistic patterns that are systematically preferred in human languages should be consistent with what is more readily learned, and vice versa. This prediction has generated a large body of findings indicating, for example, that phonological or syntactic structures that are typologically unmarked in natural languages emerge earlier in children's production or are preferred by adult participants in artificial language experiments compared to structures that are typologically marked.

In this talk, I examine a case where this generalization fails, and discuss its implications for this general strategy in exploring the link between language acquisition and linguistic theory. The particular case relates to phonological repetitions within a lexical unit, as exemplified by the repetition of the same syllable in words like *cocoa* (/koko/). There is typological, statistical and psycholinguistic evidence that, except when it is employed morphologically (that is, as reduplication marking plurality, iterativity, intensity etc.), languages tend to avoid such repetitions (Berent, Bat-El, Brentari, Dupuis, and Vaknin-Nusbaum 2016, Monaghan and Zuidema 2015, Pozdniakov and Segerer 2007). Yet, there are learning theories that argue that human perception and memory should prefer string-internal repetitions, including those in linguistic structures (Endress, Nespor, and Mehler 2009). This claim is not only consistent with neonates' neurological responses to auditory stimuli with repetition (Gervain, Macagno, Cogoi, Peña, and Mehler 2008; Gervain, Gerent, and Werker 2012) and the preponderance of sound repetitions in infant-directed vocabulary (Ferguson 1964, 1977), but also with experimental evidence that infants are more adept at segmenting and learning words consisting of identical, rather than non-identical, syllables (Ota and Skarabela 2016, in press). These findings indicate that, when it comes to phonological repetitions, there are diametrically opposite tendencies between what is preferred by learners and what is preferred by language systems.

What are the implications of this observation? First, it shows that the putative link between learning and language universals may not be as straightforward as we might think, and a more nuanced understanding of the relationship is in order. Second, the presence of general linguistic patterns in conflict with learning biases suggests that some factors that shape human languages can trump learnability pressures. Lastly, it raises the possibility that, although having served us extremely well, the general strategy of focusing on consistencies between acquisition and language universals may also have blinded us from potentially illuminating dynamics between learning and linguistic patterns that we have not paid sufficient attention to. I will address these issues by drawing from the insights and methodology that have been developed in the study of language evolution.

Vague Language Use in the 2016 U.S. Presidential Debates

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Vague language (e.g. 'stuff', 'thing', 'or something like that', and 'might') is prevalent in both spoken and written language (Cutting, 2015) to the extent that it "has come to occupy a new place of legitimacy as a potentially crucial area of inquiry into language use, particularly for understanding the dynamics of interpersonal interaction" (Fernández & Yuldashev, 2011, p. 2610; see also Parvaresh & Ahmadian, 2016). Vague expressions fulfill important social functions, such as "establishing interpersonal rapport" (Cutting, 2015, p. 108). For example, in a sentence such as "Checkbooks, cash notes, and all other things must be put in the safe upstairs" the expression and all other things constitutes an example of vague language use in that while the expression cues the listener to interpret the preceding elements (i.e. checkbooks and cash notes) as examples of a more general category (e.g. 'valuable papers/items'), it is not entirely clear what other items and all other things might include. As such, vague expressions depend to a great extent on assumptions of shared knowledge between the speaker and the hearer (Tomasello, 2003).

While vague language has to date been a topic of extensive research in a variety of settings, it appears that no research study has yet focused on the use of vague expressions in such high stake endeavours as presidential campaigns and their corresponding debates. Such an inquiry would, theoretically, be appealing in that vague language items have enabled interactants to achieve a wide range of interactional functions, especially in face-to-face interactions. Indeed, U.S. presidential debates constitute a clear example of those situations in which the candidates can be expected to resort to whatever strategy will channel more votes their way. As Benoit, McKinney and Lance Holbert (2001, p. 260) note, "[t]he huge size of the presidential debate audience means that capacity for influence is considerable." Furthermore, another feature of such debates is that the responses given by the candidates are, to a great extent, spontaneous which makes the study of the conversational strategies employed even more worthwhile (Benoit et al., 2001).

The current study is concerned with the three 2016 presidential debates held between the Democratic nominee Hillary Clinton and the Republican nominee Donald Trump. The first debate took place on September 26, the second on October 9 and the last debate on October 19. Drawing on transcribed video-recordings of the debates in question, this study is an attempt to provide a quantitative and qualitative analysis of the use of vague language by the candidates under scrutiny. As far as vague expressions are concerned, the study reveals important differences between the two candidates. The differences observed are attributed both to the personality, career, and professional differences between the candidates and to the different communicative purposes they seek to achieve.

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Two types of split ergativity in Lak=two sides of the same coin

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Introduction. Many ergative languages have contexts where the regular case and agreement pattern breaks down: leaving many complications aside, the external argument gets absolutive case instead of the expected ergative, which in its turn leads to changes in the agreement pattern. Lak, a Nakh-Daghestanian language (Daghestan) has 2 types contexts where the usual case pattern does not hold: 1) both external (EA) and internal (IA) arguments bear absolutive case in progressive contexts; 2) 1st and 2nd person EAs bear absolutive in present simple and present simple assertive tenses, thus giving rise to apparent person hierarchy effects in person agreement. In this paper, I argue that both types of split ergativity arise due to the same reason –in the relevant TAM context, the EA is not in the domain of ergative case assignment.

Basics of Lak syntax. Lak is a morphologically ergative language. Consider (1-4). First, subjects of intransitive clauses (unergative, (1), and unaccusative, (2)) pattern with IAs of transitive clauses with respect to case marking: they are absolutive. EAs of agentive transitive verbs have ergative case, (3). Lak experiencer verbs have their EAs in dative or locative cases, as in (4). Lak finite verbs can be marked for two types of agreement features: i) gender (prefix or infix, glossed with Roman numerals); ii) person (suffix). Importantly, Lak agreement is always controlled by an absolutive marked argument (see Gagliardi et al 2014 for an overview).

Split Ergativity I. Lak, like many other languages of the family, has an aspect based split ergativity: in progressive aspect, EAs of agentive transitive verbs do not have regular ergative marking but absolutive (while EAs of experience verbs retain their dative/oblique case), as in (5). The change in the case marking results in change in agreement pattern: class agreement on lexical verbs is still controlled by an absolutive marked IA, whereas class and person agreement on auxiliaries is now controlled by an absolutive marked EA.

Split Ergativity II. Besides the aspect based split ergativity, Lak has other contexts where the usual ergative-absolutive case alignment on arguments does not hold: when the verb is in present simple or present simple assertive (El'darova 1999, Kazenin 2013). Unlike the aspect based split ergativity, only 1st and 2nd person EAs of agentive verbs are subject to change in case marking, (6), i.e., they become absolutive. In a similar manner to the previous case, there is a change in the usual agreement pattern: as before, the class agreement is controlled by an absolutive IA, whereas the person agreement is now controlled by an EA. The change in agreement also serves as a test for case marking: Lak 1st and 2nd person pronouns are syncretic between absolutive and ergative and the only way to identify what case a pronoun has is by agreement—if the pronoun controls agreement, it is absolutive, otherwise, it is ergative.

Proposal. In this paper, I propose an account that can capture both types of split ergativity in Lak: EA of transitive verbs are located outside the ergative case domain (cf., Jelinek 1993, Merchant 2006). Capitalizing on the previous work and evidence from nominalizations (Gagliardi et al 2014, Radkevich 2016), I assume that the domain of ergative is vP and ergative is a structural case (contra Woolford 2006, Aldridge 2008, Legate 2008, a.o.), i.e., both ergative and absolutive cases are structural and assigned in vP. Furthermore, case licensing is performed configurationally (cf., Marantz 1991, Bobaljik 2008, Preminger 2014, Baker 2015, Levin 2017, a.o.). The crucial part of the proposed analysis is the idea that the EA must move out of vP in the following two contexts: 1) EAs in the progressive aspect moves to Spec, AspP, as in (7); 2) the 1st and 2nd person EAs move to Spec, TP in the present simple and present simple assertive, as in (8). The reason for which the EA undergo movement is attributed to the properties of functional heads whose specifiers must be filled with any EA (AspP with [PROGRESSIVE] feature specification) or with 1st and 2nd person EA (TP with [PRESENT SIMPLE] feature specification).

Case calculations. First, inherent/lexical (dative) cases are assigned. Second, if a DP is not case-marked and c-commands another DP in vP, it gets ergative case. Finally, if DP does not have any case, it gets a default case, i.e., absolutive. In the regular contexts, EAs get either ergative or dative cases, while IAs are left with default absolutive case. In the two contexts where EAs move out outside vP, they end up having either dative/locative case (if they are

used with experiencer verbs) or absolutive since they are outside vP where ergative can be assigned, thus they are left only with an option of having a default case (absolutive).

Conclusion. In this paper, I propose an analysis of two types of split ergativity in Lak which crucially relies on the following assumptions: i) ergative is not inherent case; 2) ergative is licenced in vP; 3) case assignment is done configurationally; 4) in the context of split ergativity EAs are located outside vP.

Data

(1) Ga t:u-χun ∅-aχč-unu ∅-ur-∅
he.**I.ABS** I.OBL-LOC **I.SG**-pick.on-PRF.GER **I.SG**-AUX-**3.SG**
'He picks on me.'

(2) Ninu **d**-awx-un-**ni**.
mother.**II.SGABS** **II.SG**-fall.PRF-PST-**3**
'Mother fell.'

(3) Rasul-lu-l na ∅-uwh-un-**na**.
Rasul.I-OS-ERG I.**I.ABS** **I.SG**-catch.PRF-PST-**1.SG**
'Rasul caught me.'

(4) T:u-n ga k:a**w**k:-un-**ni**.
1.SG-DAT he.**I.ABS** **I.SG**.see-PST-**3.SG**
'I saw him.'

(5) a. Aˁli q:at:a **b**-ullaj ∅-ur-∅.
Ali.**I.ABS** house.**III.SG.ABS** **III.SG**-do.PROG **I.SG**-AUX-**3.SG**
'Ali is building a/the house.'

b. Na q:at:a **b**-ullaj ∅-ur-**a**.
I.**I.ABS** house.**III.SG.ABS** **III.SG**-do.PROG **I.SG**-AUX-**1.SG**
'I am building a/the house.'

c. Aˁli-n matematika q:a-**d**-urč'laj **d**-ur-∅.
Ali.I.SG-DAT math.**IV.SG.ABS** NEG-**IV.SG**-understand.PROG **IV.SG**-AUX-**3.SG**

d. *Aˁli matematika q:a-**d**-urč'laj ∅-ur-∅
Ali.I.SG.ABS math.IV.SG.ABS NEG-**IV.SG**-understand.PROG **I.SG**-AUX-**3.SG**
'Ali does not understand math.'

(6) a. Na ga **b**-at:a-r-**a**
I.**I.ABS** she.**III.ABS** **III.SG**-beat-PRS-**1/2.SG**
'I usually beat her.'

b. Ina ga **b**-at:a-r-**a**
You.**SG.ABS** she.**III.ABS** III.SG-beat-PRS-**1/2.SG**
'You usually beat her'

c. Zu na ∅-at:a-r-**u**
you.**PL** I.**I.ABS** **I.SG**-beat-PRS-**1/2.PL**
'You usually beat me.

d. Na zu **b**-at:a-r-**a**
I.**I.ABS** you.**PL.ABS** **PL**-beat-PRS-**1/2.SG**
'I usually beat you'

e. Žu ina ∅-at:a-r-**u**
we.**ABS** you.**I.**ABS **I.SG**-beat-PRS-**1/2.PL**
'We usually beat you.'

f. Žu ga ∅-at:a-r-**u**
we.**ABS** he.**I.ABS** **I.SG**-beat-PRS-**1/2.PL**
'We usually beat him.'

g. Ga-na-l na ∅-at:a-r-**a**
he-OS-ERG I.**I.ABS** **I.SG**-beat-PRS-**1/2.SG**
'He usually beats you.'

h. Ga-na-l zu **b**-at:a-r-**u**
he-OS-ERG you.**PL** **PL**-beat-PRS-**1/2.PL**
'He usually beats you.'

i. Ga-na-l ga ∅-at:a-j-∅
he-OS-ERG he.**I.ABS** **I.SG**-beat-PRS-**3.SG**
'He usually beats him.'

(7) [$_{ASPP}$ EA [ASP [$_{vP}$ t [v [$_{VP}$ IA V]

(8) [$_{TP}$ EA [T [$_{ASPP}$ [$_{vP}$ t [v [$_{VP}$ IA V]

Testing the abundance inference of pluralised mass nouns in Greek

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Summary: Some languages that exhibit a mass-count distinction allow pluralisation of mass nouns. In Greek, plural marking can appear on mass nouns in existential contexts, giving rise to an *abundance inference* indicating that there is a large quantity of the mass/stuff that is being talked about. This inference has recently been analysed as a scalar implicature, in parallel with the multiplicity inference of pluralised count nouns (Kane et al. 2016). We tested Greek-speaking 4–5-year-olds and adults on the abundance inference in upward- and downward-entailing contexts, and on the scalar inference of 'some'. The results provide support for an implicature analysis: children and adults computed more abundance inferences in upward-entailing contexts than in downward-entailing contexts, and children computed fewer of both inferences than adults did.

Theoretical background: In many languages, including English, plural marking cannot appear on mass nouns. (1) is unacceptable, unless the mass term is reinterpreted as referring to *types of* or *standardized quantities of* water (e.g., Chierchia 1998, 2011). Recently, it has been observed that pluralised mass nouns are attested in a variety of languages, e.g., Greek (Tsoulas 2008), Innu-Aimun (Gillon 2015), Yudja (Lima 2015), Nez Perce (Deal 2016), and can be interpreted without coercion. In Greek, for example, the equivalent of (1) in (2) is acceptable, and crucially is not interpreted as types/standardized units of water (Tsoulas 2008). In addition, although mass nouns in Greek can be pluralised, they retain their mass properties; for example, they cannot directly combine with numerals, as shown in (3).

(1) *Waters are dripping from the ceiling. *English*

(2) Trehun ner-a apo to tavani. *Greek*
drip.3PL water-PL from DET ceiling
'Water is dripping from the ceiling'

(3) *Dio ner-a trehun apo to tovani.
two water-PL drip.3PL from DET ceiling
'Two waters are dripping from the ceiling' [from Tsoulas 2008, p. 135]

Most relevantly for us, the pluralised mass noun in Greek (2) triggers an abundance inference (4) that is not present for the corresponding singular (Tsoulas 2008).

(4) $\rightsquigarrow$ *Much water is dripping from the ceiling.*

Following suggestions in Tsoulas (2008) and Harbour (2008), Kane et al. (2016) analyse this abundance inference as a scalar implicature, extending the account of the multiplicity inference of pluralised count nouns from Spector (2007). They argue that the abundance inference of (2) is simply the vague/context-dependent counterpart of multiplicity inferences like (5b), which arises from (5a) (Chierchia 1998, Spector 2007, Sauerland 2003, Zweig 2009, Ivlieva 2013).

(5) a. John saw giraffes. b. $\rightsquigarrow$ *John saw more than one giraffe*

Experimental background: Despite considerable variation in reported rates of implicature calculation in children (Chierchia et al., 2001; Gualmini et al., 2001; Papafragou & Musolino, 2003, a.o.), a robust finding is that without extra facilitation, 4–6-year-old children typically compute fewer scalar implicatures than adults. Against this background, Tieu et al. (2014, 2016), following previous work by Sauerland et al. (2005), conducted a truth value judgment task experiment to test the hypothesis that the multiplicity inference of pluralised count nouns is an implicature. Their results support the implicature analysis in two ways. First, children and adults computed the inference more often in upward- than in downward-entailing contexts. Second, children computed the inference less than adults did, following the general pattern found with scalar implicatures.

Present study: We designed an experiment to test the proposal that the abundance inference of pluralised mass nouns is a scalar implicature, along the lines of the multiplicity inference triggered by count nouns (Kane et al. 2015, Tsoulas 2008, Harbour 2008). We adapted Tieu et. al's paradigm, using an adapted version of Katsos & Bishop's (2011) ternary judgment task, originally designed to test children on scalar inferences. Participants were presented with short animations on a laptop. An experimenter read a short experimental context and asked questions of a puppet, who responded with the test sentences (through pre-recorded videoclips). Participants were instructed to judge the puppet's sentences by rewarding the puppet with 1 strawberry, 2 strawberries, or 3 strawberries.

On the critical targets, sentences containing pluralised mass nouns were uttered in contexts in which the abundance inference was clearly not satisfied (e.g., (6), Fig. 1):

(6) EXP: Tiger wants to build a sand castle with a moat around it but he only has this one small bucket with him. Tiger takes just **a small amount of water** there. Now he has no more space in his bucket, so he doesn't take any sand. Okay, Ellie, so Tiger didn't take any sand. What about waters?
PUPPET: **I tigri pire nera!** 'The tiger took waters!'

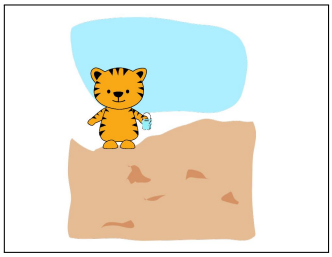

Figure 1: Target image for (6).

On the critical scalar implicature trials, Ellie uttered sentences containing 'some' in contexts in which the corresponding 'all'-sentences were true. In total, participants saw 3 positive plural targets, 3 negative plural targets (e.g., *The tiger didn't take waters*), and 4 'some' targets. 28 children (19 females, mean age 4;06) and 27 adult native speakers of Greek (14 females, mean age 29) participated in the experiment. 12 participants were excluded for scoring fewer than 5/7 correct on controls, leaving a total of 21 adults and 22 children.

Results from the target conditions are provided in Fig. 2-3. Consider first the plural targets. Neither group computed any abundance inferences in the Negative condition. Logistic regression models fitted to responses to the positive targets revealed a significant effect of Group ($\chi^2(1) = 21.4, p < .001$), with adults computing more abundance inferences from the positive targets than children. Logit models fitted to responses to the positive plural targets and 'some' targets revealed significant effects of Inference Type ($\chi^2(1) = 15.5, p < .001$) and Group ($\chi^2(1) = 23.8, p < .001$), and no significant interaction between Inference Type and Group ($p > .05$).

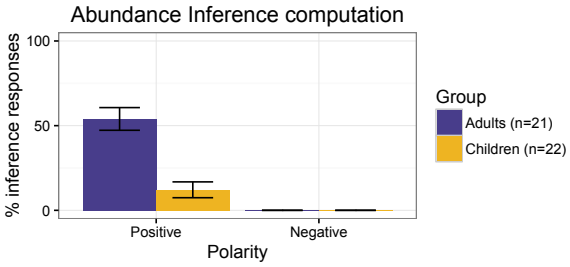

Figure 2: Mass noun targets.

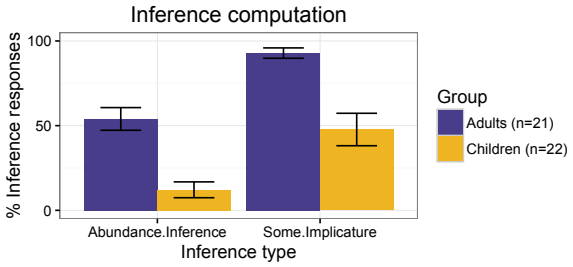

Figure 3: Mass noun vs. Some targets.

Discussion: Our results reveal that participants computed more abundance inferences in upward-entailing than downward-entailing contexts, consistent with the signature pattern of classical scalar implicatures. In addition, children computed fewer abundance inferences than adults, in parallel with their behavior on the 'some' implicature. It is worth noting, however, that both groups computed more 'some' implicatures than abundance inferences, suggesting the latter is a relatively weaker inference. This is presumably due to its context dependency with respect to what counts as a small/large amount in the context. On the whole, our results support the implicature account of the abundance inference of pluralised mass nouns, paving the way for a unification of the inferences of plural morphology across the mass/count divide.

Spoken English collections at the British Library

Jonnie Robinson, British Library

Abstract: An introduction to content, resources and services provided by the British Library sound archive to support linguistic research. The session will explain how researchers can access and use the library's extensive collection of sound recordings of British accents and dialects and evaluate recent projects that have enabled the Library to improve access to its collections, exploit existing content, create new research data sets and collaborate with a variety of research audiences.

Biography: Jonnie Robinson is Lead Curator of Spoken English at the British Library and responsible for the Library's extensive archive of sound recordings of British accents and dialects. He has worked on two nationwide surveys of regional speech, the *Survey of English Dialects* and *BBC Voices* and in 2010 co-curated the world's first major exhibition on the *English Language, Evolving English: One Language, Many Voices*.

The adnumerative in West Polesian

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The morphosyntax of numeral phrases in Slavonic languages follows a pattern that is uncommon cross-linguistically. For example, in Russian lower numerals ('two' to 'four') govern what resembles GEN SG (in most instances), and higher numerals ('five' to 'twenty') GEN PL. However, in a construction of this type the adjective has a plural form, resulting in an apparent mismatch on the number values on the adjective and the noun it modifies (*vid.* 1):

(1) *tri* *dobr-yx* *brat-a* (Russian)
three.NOM good-**GEN.PL**? brother-**GEN.SG**?
'Three good brothers'.

This is surprising, but well established in the literature (Corbett, 2000, 2012; Mel'čuk, 1985). However, numeral phrases in West Polesian (an Eastern Slavonic variety spoken between Belarus, Poland and Ukraine) are even more intriguing. Data from my recent fieldwork show that West Polesian nouns governed by lower numerals have developed a morphologically distinct 'adnumerative' (ADNM) form, which in the examples bellow is distinguished from NOM PL by the position of the stress (*vid.* 2a-c):

(2) a) *(odɪn)* *brat* '(one) brother'. b) *bra't-ɪ* 'brothers'. (West Polesian)
one.NOM.M. brother.NOM brother-NOM.PL

c) *trɪ* ***'brat-ɪ*** 'three brothers'.
three.NOM brother-ADNM

The adnumerative form has no extra function or meaning other than indicating that the heading numeral is a lower one. Hence, the existence of the adnumerative seems to be in conflict with the notion of 'language economy'.

In the following tables (*vid.* Table 1, 2), we can see that the lexeme *'traxtor* 'tractor' in West Polesian has an adnumerative form, distinct from other forms of the paradigm. However, it is not clear whether it is a case or a number form because it displays features of both, but none of them fully.

	Singular	Plural
NOM	*'traxtor*	*traxto'rɪ*
GEN	*'traxtora*	*traxto'rov*
ADNM	***'traxtorɪ***	

Table 1: The adnumerative as a case.

	Singular	Plural	Adnumerative
NOM	*'traxtor*	*traxto'rɪ*	***'traxtorɪ***
GEN	*'traxtora*	*traxto'rov*	*traxto'rov*

Table 2: The adnumerative as a number.

On the one hand, the adnumerative can be regarded as a case value (*vid.* Table 1), as it is in complementary distribution with other cases, and it marks the relationship between a numeral and a noun. But it cannot be clearly attached to the singular or plural paradigm which makes the adnumerative very distinct from any other marginal case (i.e. the vocative, is undoubtedly attached to the singular). On the one hand, the adnumerative can be described as a number (a type of paucal) (*vid.* Table 2), because it is in complementary distribution with the singular and plural forms of the nominative sub-paradigm. Thus, there are solid arguments to support and disprove both analyses which I address in the paper.

The adnumerative is typologically very rare. So far, I have only found a few instances documented in the Indo-European family. I have collected an extensive corpus in West Polesian which includes a distinction between dialectal and idiolectal variation, and it shows that the adnumerative is morphologically robust. That makes West Polesian an important source of evidence for the study of the adnumerative cross-linguistically. I consider all the hypotheses in the light of this new data. I argue that the adnumerative is a number based on its etymology (an eroded dual number from Common Slavonic); its semantically well-defined basis; and the fact that it only occurs with direct cases. Finally, I contemplate the implications of such an approach for the typology of number.

Key words: ***adnumerative; numeral phrases; Slavonic; Typology; West Polesian.***

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Continent-wide, full-lexicon phonological typology overturns our view of the Australian laminal contrast

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The most striking areal feature of Australian phonological typology is its sweeping zones of coronal contrasts which cross-cut major language families (figs 1,2; Busby 1980, Dixon 1980, Evans 1995, Baker 2014), and which describe the presence/absence of categorical contrasts. In recent years though, phonological theory has increasingly turned attention from categorical distinctions to GRADIENT degrees of contrast (Frisch *et al.* 2004, Hall 2009, Wedel *et al.* 2013), yet such phenomena are still poorly understood away from major languages like English. Here we show that continent-wide, full-lexicon typology, based on a dataset of over 1.2M phonemes from 166 languages, reveals the Australian laminal contrast (between lamino-palatals and -dentals) to be strikingly diverse, and moreover, its diversity in Pama-Nyungan is surprisingly concordant with phylogenetic structure (Bowern & Atkinson 2012).

Fig 1. Presence/absence of laminal contrast

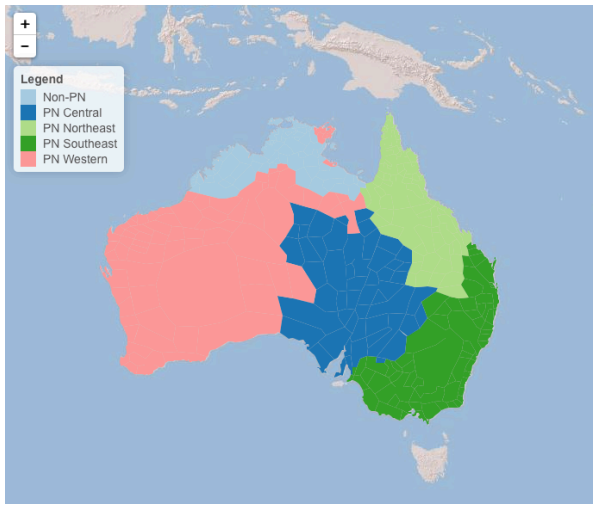

Fig 2. Major genealogically-defined areas; PN=Pama-Nyungan

MATERIALS We assembled phonemicized lexicons from 166 Pama-Nyungan and non-Pama-Nyungan languages. This involved extensive use of semi-automated processes to digitize, scrub, graphemicize, phonemicize, visualize and analyse the data. The process creates a sequence of versions, so that all work is recorded. If later processes reveal errors in earlier ones, these can be rapidly repaired. We describe useful techniques we have innovated for such research, including the use of entropy measures and data visualization to detect and localize conflicts, errors and extraneous content in very large digital datasets.

METHOD We then constructed a query language — a phonological variant on regular expressions (regex) which we dub 'phonex' — to rapidly and flexibly search the dataset. In methodological terms, this inverts the traditional approach of constructing a cross-linguistic database, in which some number of 'fields' has a value for each language; instead, any number of novel variables can be created at the point of querying (Cooper 2014), allowing

more, and highly tailored, research questions to be asked by any user of the dataset. For this study we constructed queries to examine laminal contrasts in phonological environments known from earlier research to be of interest (Dixon 1980, Hamilton 1996).

RESULTS We highlight the most striking results regarding the uneven nature of Australian laminal contrasts (which oppose palatal and dental places of articulation):

(1) Within their contiguous area in the continent's north and west, only a few non-Pama-Nyungan languages of the eastern Kimberely have a laminal contrast. However, this reveals itself to be quite unlike the contrasts in Pama-Nyungan (and in the more easterly, non-Pama-Nyungan Tangkic family) in its consistent, strong skewing towards palatals.

(2) Two small patches of Pama-Nyungan languages on the east coast lack the laminal contrast. We find that large bands of contiguous languages also show particularly low, gradiently-measured contrast in many phonological environments (figs 3,4).

(3) Although zones of categorical presence/absence of laminal contrast cut across major language family boundaries, their outlines nevertheless broadly fit with genetic sub-groups. In Pama-Nyungan, lack of contrast coincides closely with the Wati-Marrngu and Ngumpin-Yapa clades in the west, and the Queensland/NSW border coastal clade in the east (Bowern & Atkinson 2012). And, while maps are useful visualization tools, our method also enables phylogenetic statistical analysis. A novel finding here is that gradient measures of contrast show strong phylogenetic signal (average Blomberg's K=0.86, $p<0.01$, for n=24 traits, where a value of 1 is perfect signal, 0 is none, as measured against a reference tree inferred from cognacy scores; Macklin-Cordes & Round 2015).

DISCUSSION Australia's phonological typology has long been discussed in terms of uniformity, and of areality which obscures phylogeny. New, more powerful techniques combined with massively larger datasets have now begun to overturn that view. Australian laminal contrasts vary starkly across the continent and are strongly correlated with phylogeny.

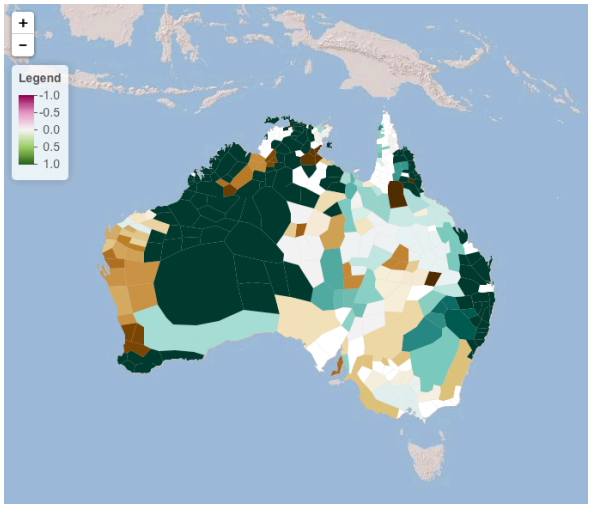

Fig 3. Skew to dental (cool colours) / palatal (warm) in context: /a__V

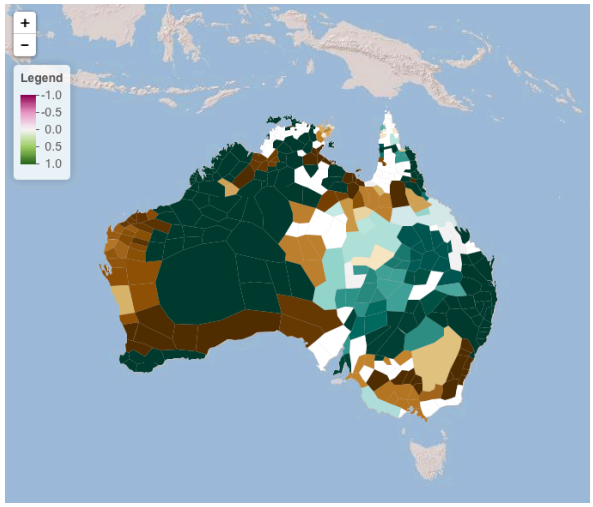

Fig 4. Skew to dental (cool colours) / palatal (warm) in context: /#__i

Mental-state attribution in storybook narratives of Mandarin-speaking children with autism spectrum disorder: Investigating relations to theory-of-mind abilities

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Mental state attribution is indicative of a narrator's attempts at sense making and representing multiple perspectives on events. Following the theory-of-mind (ToM) account for the social-communicative difficulties in autism spectrum disorder (ASD), many studies have examined autistic children's ability to make mental-state attribution (MSA) in narratives (for a review, see Stirling, Douglas, Leekam, & Carey, 2014). Nevertheless, most narrative studies on Mandarin-speaking children with ASD failed to measure ToM abilities together with narrative abilities; moreover, they mostly included preschoolers or younger school-age children as participants. As a result, we know very little about the ability of older school-age children with ASD in making MSA and still lack knowledge about the relationship between ToM abilities and MSA in their narratives.

This study examined the employment of MSA in narratives of Mandarin-speaking children with ASD. Thirteen children with ASD and 13 typically-developing controls (5th graders) were matched on linguistic and cognitive abilities. The narratives were elicited using *Frog, where are you?* (Mayer, 1969). The Chinese Theory of Mind Battery (Yeh, Hua, & Liu, 2009) was used to measure participants' ToM abilities. The analysis focused on the relationship between ToM performance and MSA which was classified into four categories including lexical expressions referring to emotion, desire, cognition, and perception. Another merit of the study is the follow-up of children's development in making MSA in terms of a retrospective cohort method by tracing back to their MSA measures when they were 2nd graders.

In line with previous research, neither the proportion of the overall MSA nor the instances for individual categories of MSA differed significantly between the two groups of 5th graders (Yang, 2011). Consistent with Losh and Capps's (2003) research, this study detected no significant association between ToM abilities and the use of MSA. It is noteworthy that the retrospective comparisons revealed subtle developmental changes with regard to different categories of MSA, which highlights the importance of follow-up research and that of examining different categories of MST separately. The results provide additional evidence for the debate on 'delayed or deviant' development in children with ASD. The interrelatedness among general cognitive abilities, ToM abilities, and narrative abilities were included in the discussion.

Keywords: ASD, mental state, Mandarin-speaking children, theory of mind, follow-up

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When silence gets in the way: asymmetric extraction from ellipsis in British dialects

Craig Sailor and Gary Thoms

Introduction. "British *do*" is a variant of VP-ellipsis in British English where the auxiliary that would immediately precede the ellipsis site is followed by a nonfinite form of *do* (Baker 1984):

(1) a. I won't leave early, but John might do. (all judgments for BrE)
b. I didn't leave early, but I should have done.

An intriguing property of BrE *do* noted by Baltin (2005) is that this putative ellipsis site resists both *wh*-extraction (2), and QR for object>subject scope (3) (unlike regular VPE):

(2) *Although I don't know which book Fred will read, I do know which book Tom will do.
(3) Some man will read every book and some woman will do, too. **every>some*

These facts lead Baltin (2005) to conclude that BrE *do* is a verbal proform: an atomic element out of which nothing can move. However, it has since been observed that there are a number of situations where BrE *do* does seem to allow extraction, namely with topicalization (4), relativization (5), raising (6) and QR for object>negation scope (7):

(4) (?)Hazelnuts, he won't eat, but almonds, he might do. (Abels 2012, contra Baltin 2012)
(5) A man who steals does not incur the same measure of public reprobation which he would have done in the past. (Baker 1984)
(6) He ate more than he should have done. (Abels 2012)
(7) John might seem to enjoy that, and Fred might do, too. (Baltin 2012)
(8) Rab won't finish 2/3 of the exam, and Morag won't do either. *2/3>neg* (Thoms 2011)

Thus, it seems to be an instance of VPE (a surface anaphor, in Hankamer & Sag's 1976 sense), albeit one which resists extraction (Aelbrecht 2010). Thoms (2011) argues that the correct generalisation is not that BrE *do* prevents extraction, but rather that it disrupts reconstruction of extracted material, be it A'-moved or A-moved. If correct, the difference in grammaticality between e.g. (3) and (8) is due to the fact that object>subject scope requires subject reconstruction into *v*P (Hornstein 1995) but object>neg scope doesn't, and the difference between *wh*-extraction and relativization is due to the fact that *wh*-movement always reconstructs but relativization doesn't (Sauerland 2003, but see below for a principled exception).

The puzzle. It isn't at all clear why such a generalisation ("don't reconstruct into a VPE site demarcated by *do*") should hold, given that the additional *do* is a dummy element with no discernible semantic content. Non-*do* VPE freely allows reconstruction back into the ellipsis site, so it is evidently something about *do* itself that causes the problem. The question then arises: why would *do*, a dummy element, block reconstruction, and only in the context of VPE?

Proposal. We argue that reconstruction itself isn't actually the relevant factor here, but rather the means by which reconstruction occurs. If reconstruction is simply interpretation of a lower (unpronounced) copy (Chomsky 1995), then such a copy must be present/licensed to achieve a reconstructed reading. Crucially, though, the dependencies discussed above that don't allow reconstruction don't involve lower copies.

Non-reconstructing topicalization (4), relatives (5), comparatives (6), etc. are all A'-dependencies that have been independently argued to involve null operators, plus base-generation of the left-edge element (Lasnik & Stowell 1991 on topicalization, Carlson 1977 on matching (non-raising) relatives, Chomsky 1977 and Kennedy & Merchant 2000 on comparatives, etc.). As operator phenomena, none involve movement of the actual left-edge XP, and thus no lower copies of XP (and thus no reconstruction). Clear confirmation of this can be seen in minimally different examples where operators are disallowed and reconstruction is forced, e.g. in raising relative clauses (e.g. amount and free relatives: Bianchi 2004). In such cases, BrE *do* is once again prohibited:

(9) a. I put in my pocket all the money I could (??do).
b. He buys what he can (*do).

Thus, the presence of a copy (rather than an operator) seems to be the relevant factor, not reconstruction specifically. Regarding the A-dependencies in (7)-(8), Lasnik (1999) and Fox (1999) claim that A-movement which doesn't reconstruct fails to leave behind lower copies (is "traceless"), so the pattern is extended in such cases as well: no copy means BrE *do* is available.

Thus, we claim that BrE *do* isn't allergic to reconstruction, despite initial appearances. Instead, it's allergic to copy-based movement (which reconstructs), but compatible with operator-based dependencies (which don't). The [Spec, *v*P] position plays a crucial role, in its guise as a phase edge (and thus an escape hatch for movement): when it contains a copy of some higher moved element, BrE *do* is blocked; when it contains a null operator (or nothing at all), BrE *do* is possible. We argue that this pattern follows from a component of Haddican's (2008) analysis of BrE *do*, namely that it is a little-*v* clitic that requires a verbal host to lean on to its left. For example, it can't be stressed (indicated with SMALL CAPS: (9)); it can't be separated from the preceding verbal head by interveners (10); it can't be stranded by T-to-C of its host (11); and, it can't take another clitic (i.e. a contracted auxiliary) as a host (12):

(9) A: Do you think you'll arrive on time?
  a. B: I MIGHT do.
  b. B': *I might DO.

(10) a. *I don't know if she'll come, but she should obviously **do**.
  b. *I don't know if she'll come, but she should, it seems, **do**.

(11) *I know Maria will come, but will your brother **do**?

(12) a. *Sarah will arrive on time, and Tom'll **do** too.
  b. Sarah will arrive on time, and Tom will **do** too.

Given the clitic status of *do*, we propose that the apparent sensitivity of BrE *do* to reconstruction in fact reflects its (in)ability to cliticise across material in [Spec, *v*P]. Specifically, if an XP in [Spec, *v*P] has phonological content in its lexical entry, it will block *do*. On the other hand, if that XP is lexically specified as silent/null, *do* can cliticise across it.

(13) a. ... aux SPEC do
  \----x----/
  Cliticisation blocked by overt Spec, e.g. (2)

  b. ... aux PRO/OP do
  \------------/
  Cliticisation possible across null-OP or PRO, e.g. (4)-(5)

(We assume with Lasnik and Saito 1992 that the A-dependency between the subject in [Spec, TP] and [Spec, *v*P] may be derived by raising or control, with only raising allowing reconstruction and control being required in examples like (1) where *do* incorporates.)

Thus, the grammar seems to exhibit a sensitivity to derived silence (deleted copies of moved XPs) versus lexically-specified silence (null operators, PRO, etc.). This is highly reminiscent of Chomsky's (1977) influential analysis of *wanna*-contraction: "traces" of movement (*qua* deleted copies) interfere with PF processes, but null categories do not. In the talk, we explore whether the grammar's apparent sensitivity to this distinction is primitive, or if it in fact reduces to an ordering of operations (i.e. cliticisation precedes copy deletion, of which there may be some independent evidence).

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Focus Affecting Neg-Concord Licensing in Italian

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Italian n-words lower than T must be licensed by a c-commanding licenser higher than T; see (1) and (2). Furthermore, negative subjects in specTP can act as neg-concord licensers (3), fronted focused n-words need no licensing (4), and licensing under reconstruction is ungrammatical (5) and (6) (Zanuttini 1991, Haegeman 1995, Penka 2011. Main stress shown in capitals).

(1) Gianni non$_{Licenser}$ ha mangiato nulla$_{Licensee}$.
John not has eaten anything
'John ate nothing.'

(2) * Gianni ha mangiato nulla$_{Licensee}$.
John has eaten anything

(3) Nessuno$_{Licenser}$ ha mangiato nulla$_{Licensee}$.
Nobody has eaten anything
'Nobody ate anything.'

(4) NULLA$_{Focus}$, Gianni ha mangiato!
Nothing, John has eaten
'John ate NOTHING.'

(5) * [Nessun$_{Licensee}$ articolo di chi] non$_{Licenser}$ hai letto <~~nessun articolo di chi~~> ?
No article of whom (you) not have read

(6) [L'articolo di chi] non hai letto <~~l'articolo di chi~~>?
The article of whom (you) not have read
'Whose article did you not read?'

This talk examines the surprising way information structure, and specifically focus fronting, affects neg-concord between negative subjects acting as licensers and lower negative arguments – e.g. objects – acting as licensees. For example, given (1)-(6) above, we might erroneously expect (7) and (8) to be grammatical as well. In (7), the focus-fronted negative object could at first be assumed to occur in the same fronted position of the fronted object in (4). Likewise, the subject of (7) could be expected to occur in the same specTP position it takes in (3). In (8), an analysis based on Rizzi (1997, 2004) and Rizzi & Cinque (2016) would predict that the focused subject c-commands the negative object,and thus licenses it. These predictions, however, are not borne out. Both sentences, like any other sentence with the same pattern, are ungrammatical.

(7) * NULLA$_{Focus}$, ha mangiato nessuno!
Nothing, has eaten nobody

(8) * NESSUNO$_{Focus}$, ha mangiato nulla!
Nobody, has eaten nothing

This talk will show that the observed ungrammaticality is a direct consequence of the right-dislocated status of the constituents following Italian fronted foci. As shown by Samek-Lodovici (2015), Italian fronted foci never c-command the right-dislocated TPs following them. Since c-command is disrupted, the fronted negative foci of (7) and (8) cannot act as licensers for the n-words following them, and since reconstruction is unavailable the two sentence are inevitably ungrammatical. The same problem is absent in (3) and (4). In (4), the post-focal right-dislocated clause does not contain any n-words, so licensing is not an issue. In (3), the sentence involves neither focus fronting nor right-dislocation; therefore the negative subject does c-command the following negative object, enabling its successful licensing.

My talk will also examine and exclude other tempting yet demonstrably incorrect alternative accounts for the ungrammaticality of sentences like (7) and (8). For example, I will show that the hypothesis that the occurrence of licensers and/or licensees in post-focal position might itself somehow disrupt licensing is refuted by the grammaticality of (9), where licenser and licensee both occur postfocally.

(9) [Alla festa di GIANNI]$_{\text{Focus}}$, nessuno$_{Licenser}$ ha mangiato nulla$_{Licensee}$!
At John's party, nobody ate anything
'Nobody ate anything at JOHN'S PARTY.'

Similarly, I will show that the hypothesis that the focused status of the fronted phrase in (7) and (8), rather than the lack of structural c-command, might somehow adversely interfere with negative concord should also be rejected.

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The acquisition of argument-structure across typological boundaries: manner-of-motion verbs in Anglo-French

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Background and objectives. According to Talmy (1985), languages around the world differ in the way they express directed motion. In satellite-framed languages (S) like English, a sentence like *she danced into the room*, where the Goal of motion is expressed in a prepositional constituent, is perfectly grammatical. In contrast to this, verb-framed languages (V) like French have to encode the Goal of motion in a separate verb. Thus, *Elle danse dans la salle* cannot take anything but a locative reading 'she dances in the room'. The directed motion interpretation ('into the room') is excluded in French. To encode directed motion with a manner-of-motion verb, French would have to rely on a second verb, opting for an expression such as *Elle entre dans la salle en dansant* 'she enters the room dancing'.

Anglo-French (AF, the French spoken in Medieval England) being a contact variety of two typologically distinct languages (Ingham 2010), is an ideal object to study language acquisition and change. Contact influence lasted for a rather long period of time in varying socio-cultural constellations that will eventually map to the chronological distribution of the observed phenomena. Our data shows that AF differed in some ways dramatically from the continental variety, Old French (OF). Based on new data, we will show that AF licenses satellite-framed structures that are unknown in continental OF. These constructions are, in fact, considerably older and much more frequent than previously known in the literature. However, in the outcome, Modern French is a typical V-language. Thus, the observed phenomena can be analysed as temporary contact influence or as 'failed change', a phenomenon that is notoriously difficult to investigate in a living language.

Given the above observations, AF can to some degree serve as a touchstone for psycholinguistic theories, in a sense that findings about language acquisition should back up the AF data. On the other hand, psycholinguistic approaches will help us shed new light in the historic socio-linguistic constellation in medieval England. For continental OF, we work with the BFM (minus the AF texts), for AF, we work with the AF texts included in the BFM and with the Anglo-Norman Hub database. We explicitly search for structures related to the V/S as they can be observed with typologically agentive manner-of-motion verbs in Medieval French. Our examples will be taken from *chevauchier* 'ride on horseback', but analyses of *courir* 'run', *nager* 'swim', *ramper* 'crawl', *cheminer* 'wander' so far confirm the picture.

Data. AF *chevauchier* clearly patterns very differently from continental *chevauchier*. We give four examples for our diagnostic: (1.) Durative expressions (such as 'for many days') co-occur with the verb considerably more often in OF than in AF (10:1). (2.) In AF we repeatedly observe a type of resultative Goal constituent which is completely unknown to OF (contra Troberg and Burnett, e.g. 2014: they refer to “medieval French”, but in fact all but one of their examples are later than to c1330). (3.) AF *chevauchier* takes part in the unaccusative-unergative alternation (indicated by the variation of the perfect auxiliary, *estre* vs *avoir*), which is not the case with OF *chevauchier*. (4.) AF frequently uses the *présent accompli* with manner of motion verbs, whereas this tense is virtually not attested with continental *chevauchier*. These differences are all indicators of an aspectual change: AF *chevauchier* acquired telic properties, thus yielding a resultative interpretation. It is important that these features are virtually not found in continental Old French and that they clearly go against Talmy’s predictions for manner-of-motion verbs in a V-language. On the other hand, they nicely fit the patterns we expect to see in a satellite-framed language.

Anglo-Norman and scenarios of language acquisition. Even on the basis of the verbs analysed so far, we can say that the observed changes are not isolated, as they also occur in other semantic verb groups, and also with verbs that are integrated into Middle English (e.g. legal speech act verbs). We thus assume an intense influence from Middle English on AF on a structural level. As to its chronological dimensions, it seems to have been stronger in the earliest times (1066 to ca. 1230) and from the latter half of the fourteenth century. With regard to acquisition, we assume that during the peak of contact influence, from ca. 1230–1350, people in Medieval England lived a situation of societal bilingualism, in which they acquired, in their childhood, two independent monolingual grammars. In contrast to that, in its early and in its later phases, French seems to have been a acquired as a second language, with typical interferences from L1 coming into play.

Acquisition. In the last part, we will include studies on the acquisition of telicity in general and studies on V/S framing in particular. In general, telicity is said to be a salient property that is acquired rather early. This shows e.g. in the early use of perfective verb forms. The traditional view that aspect is acquired uniformly across languages (Slobin 1985) was challenged by more recent cross-linguistic studies that put a stronger focus on the comprehension of aspect. For example, Jeschull (2003) found that children use particle verbs to refer to situations that are not completed, Wagner (2006) showed that telicity can be acquired based on structural cues like transitivity, and in a cross-linguistic perspective van Hout (2008) found that telicity is understood earlier by children acquiring a language where aspectual morphemes are morphologically distinct from other morphemes, as in Dutch or Polish (both have aspectual prefixes), than by children learning e.g. Italian (where aspect is marked mainly by tense suffixes). Further evidence is provided by studies involving the acquisition of V/S by English/French bilinguals. Engemann (2012) shows that bilinguals speaking French have a much higher preference to use the S type than monolinguals. This general finding is paralleled by the bilingual period of the Anglo-French contact situation mentioned in the previous section. Engemann (2012: 190) also could link this preference to a particular type of events, namely the *across*-events, where the possible implication of telicity seems to be particularly strong.

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A uniform analysis of embedded polar interrogatives in German

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The talk is about the interaction between German *ob*-clauses and predicate classes that embed them. Roughly speaking, there are five predicate classes: **i.** predicates denoting an epistemic or deontic question state of the matrix subject α (*sich fragen* 'wonder', *gespannt sein* 'be curious'), predicates relating to an epistemic or deontic question act of α (*fragen* 'ask', *bitten* 'request') (1); **ii.** predicates denoting some non-interactional answer finding activity of α (*bedenken* 'consider', diskutieren 'discuss') (2); **iii.** predicates denoting a proper epistemic or deontic answer act of the addressee β (*sagen* 'say', *entscheiden* 'decide'), a proper result state of α's non-interactional answer finding activity (*herausfinden* 'find out', *folgern* 'conclude') or a proper answer state of α (*wissen* 'know') (3); **iv.** predicates relating to an improper answer act of β or to an improper result or answer state of α (*nicht sicher sein* 'not be certain', *egal sein* 'do not care) (4); **v.** predicates denoting indirect speech acts (*vorschlagen* 'propose') (5).

(1) Frank ***fragt***, ***ob*** Maria kommt.
'Frank asks whether Maria will come.'

(2) Frank ***bedenkt ob***/dass Maria kommt.
'Frank considers whether/that Maria will come.'

(3) Frank ***sagt***/***entscheidet***/***weiß***, ***ob***/dass Maria kommt.
'Frank says/decides /knows whether/that Maria will come.'

(4) Frank ist ***nicht sicher***, ***ob***/dass Maria kommt.
'Frank is not certain whether/that Maria will come.'

(5) Frank hat ***vorgeschlagen***, ***ob***/dass Maria ***nicht*** kommen könnte.
'Frank has proposed whether/that Maria couldn't come.'

Predicates of class *i* only relate to the question itself, that is, they embed question intensions in terms of Groenendijk & Stokhof (1984). Predicates of class *ii* and *v* also relate to question intensions, but they also embed declaratives. Predicates of class *iii* and *iv* relate to the possible answers to the question.

Following Adger & Quer's (2001) analysis of unselected *if*-clauses, *ob*-clauses are uniquely represented as questions that correspond to the set of propositions $\{\sigma, \neg\sigma\}$ – cf. (6iv) and (3iv) below. As for *if*-clauses as in (6) which are only licensed in polarity sensitive contexts, Adger & Quer suggest that they are the complement of a non-overt determiner Δ – see (6v-viii).

(6) The bar tender$_j$ does [$_{XP}$ not [$_{VP}$ [$_{\Delta P}$ Δ [$_{CP}$ if the costumer was drunk]]$_i$ [$_{VP}$ t$_j$ admit t$_i$]]]

i. $[\![V]\!] = \lambda p\, \lambda x\, [\text{admit } (p, x)]$
ii. $[\![VP]\!] = \lambda r\, [\text{admit } (r, \text{bar tender})]$
iii. $[\![\textit{if}]\!] = \lambda p\, \lambda q\, [(q = p) \vee (q = p)]$
iv. $[\![\textit{if}\text{-CP}]\!] = \lambda q\, [(q = \text{come m}) \vee (q = \text{come m})]$
v. $[\![\Delta]\!] = \lambda R\, \lambda P\, \exists q\, [Rq \wedge Pq]$
vi. $[\![\Delta P]\!] = \lambda P\, \exists q\, [[(q = \text{come m}) \vee (q = \text{come m})] \wedge Pq]$
vii. $[\![VP']\!] = \exists q\, [[(q = \text{come m}) \vee (q = \neg\text{come m})] \wedge [\text{admit } (q, \text{bar tender})]]$
viii. $[\![XP]\!] = \neg\exists q\, [[(q = \text{come m}) \vee (q = \neg\text{come m})] \wedge [\text{admit } (q, \text{bt})]]$

Whereas Adger & Quer regard Δ as a polarity sensitive generalized quantifier, the talk extends it to a neutral generalized quantifier Ψ, which can be applied to *ob*-clauses that are embedded by predicates like *wissen* 'know' or *sicher sein* 'be certain' – cf. (3v) and (4).

(3) Frank weiß, ob Maria kommt.

i. $[\![V]\!] = \lambda p_{p \in f}\, \lambda x\, [\text{know } (p, x)]$

ii. ⟦VP⟧ = λr [know (r, frank)]

iii. ⟦*ob*⟧ = λp λq [(q = p) ∨ (q = ¬p)]

iv. ⟦*ob*-CP ⟧ = λq [(q = come maria) ∨ (q = ¬come maria)]

v. ⟦Ψ⟧ = $\lambda R_{R \in \mathcal{Q}}\ \lambda P_{P \in (\mathcal{OVP} \cup \mathcal{ASVP})}\ \exists q\ [(Rq) \wedge (P\mathbf{q})]$

vi. ⟦ΨP⟧ = $\lambda P_{P \in (\mathcal{OVP} \cup \mathcal{ASVP})}\ \exists q\ [((q = come\ m) \vee (q = \neg come\ m)) \wedge (P\mathbf{q})]$

vii. ⟦VP'⟧ = ∃q [((q = come m) ∨ (q = ¬come m)) ∧ (know q, f)]

viii. ⟦XP⟧ = ∃q [((q = come m) ∨ (q = ¬come m)) ∧ ((know q, f)]

Ψ relates the *ob*-clause to predicates like *wissen* 'know', to the set of facts (f) – cf. Hintikka (1976) and Groenendijk & Stokhof (1984). These predicates are objectively veridical (OVP) in terms of Giannakidou (2003) or Schwabe & Fittler (2014). Predicates like *sicher sein* 'be certain' are subjectively veridical (SVP) – cf. Öhl (2016) and Giannakidou (2003). Unlike Öhl, the talk suggests that the derivation of the Logical Form of these predicates is similar to the derivation (3i-viii). Since predicates like *sicher sein* 'be certain' are not objectively veridical, an affirmative context would lead to pragmatic inappropriateness. If, however, (4vii) is in the scope of a non-veridical operator, a felicitous representation results – cf. (4viii).

(4) Frank ist nicht sicher, ob Maria kommt.

vii. ⟦VP'⟧ = ∃q [((q = cm) ∨ (q = ¬cm)) ∧ (be certain q, frank)]

viii. ⟦XP⟧ = ¬∃q [((q = cm) ∨ (q = ¬cm)) ∧ (be certain q, frank)]

Glauben 'believe', which is also subjectively veridical, reveals that subjective veridicality is not a sufficient condition for a subjectively veridical predicate to embed an *ob*-clause. Additionally, the predicate must be antonymous, that is, it must be consistent with (7a) as well as with (7b), while (7b) corresponds to (4viii). However, *glauben* 'believe' is complementary if there is any epistemic activitiy involved. That is, it is only consistent with (7a), which, by the way, implies neg-raising.

(7) a. ∃q [(q = σ) ∧ (verb σ, α)] ∨ ∃q [(q = ¬σ) ∧ (verb ¬σ, α)]

b. ∀q [[(q = σ) ⇨ (¬verb σ, α)] ∧ [(q = ¬σ) ⇒ (¬verb ¬σ, α)]]

Ob-clauses of question intension embedding predicates (class *i* and *ii*) are the complement of the quantifier Ω:

(1) Frank fragt, ob Maria kommt.

v. ⟦Ω⟧ = $\lambda R_{R \in \mathcal{Q}}\ \lambda P_{P \in \mathcal{QP}}\ \exists qu\ \exists q\ [(qu = (Rq)) \wedge P\mathbf{qu}]$

vi. ⟦ΩP⟧ = $\lambda P_{P \in \mathcal{QP}}\ \exists qu\ \exists q\ [(qu = ((q = come\ m) \vee (q = \neg come\ m))) \wedge Pqu]$

vii. ⟦VP'⟧ = ∃qu ∃q [(qu = [(q = come m) ∨ (q = ¬come m)]) ∧ [ask (qu, frank)]]

Regarding an *ob*-clause as a complement of a generalized quantifier has the advantage to apply it to a contextually given matrix predicate as in (8) or to a pragmatically reconstructed illocutionary force as in (9).

(8) A: Was fragt Frank?
'What does Frank ask?'
B: Ob Maria kommt.
'Whether Maria will come.'

(9) Ob Maria kommt?
'I'm wondering whether Maria will come.'

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Overt and Null Complementizers revisited

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This study provides a new outlook of overt and null complementizers (COMPs) in clausal complements in English. Since the seminal work by Kiparsky & Kiparsky (1970; KK henceforth), it is widely assumed that the finite declarative COMP *that* can be omitted in clausal complements of non-factive verbs (e.g., *believe*, *say*, *think*), whereas it cannot be deleted in clausal complements of factive verbs (e.g., *know*, *realize*, *regret*). Most studies on the null COMP have an overarching view that overt *that* and null *that* clauses have the identical underlying structure, where the COMP, either overt or null, represents a C head (Stowell 1981, Pesetsky 1991, Bošković and Lasnik 2003), predicting both overt and null *that* clauses are predicted to show (nearly) the same syntactic distribution, contrary to fact: the so-called 'main clause phenomena' (MCP) are permitted only when *that* is present, as in (1).

(1) a. John believes/thinks/says *(that) *vegetables* Mary doesn't eat
    b. John believes/thinks/says *(that) *one day* Mary will eat vegetables
    c. John believes/thinks/says *(that) *never* has Mary eaten vegetables

On the other hand, MCP are banned in clausal complements of factive predicates, despite the presence of *that* (KK, Hooper & Thompson 1973). Researchers propose that the structure of factive complements is simpler than that of non-factive complements, and the limited syntactic behavior of factive complements is related to its simpler/reduced CP structure (Haegeman 2006, de Cuba 2007). In spite of the abundance of research on this topic, an explanation as to why the COMP *that* can be optional in non-factive clausal complements but is obligatory in factive clausal complements is still missing in the literature. We hypothesize that the different syntactic behavior observed in factive and non-factive complements is closely related to the distribution of overt and null COMPs and propose a novel structural account of overt and null COMPs in clausal complements of both factive and non-factive predicates.

Adopting Rizzi's (1997) split CP structure, we propose that null *that* clauses are FinPs (2a), whereas overt *that* clauses have an extra functional layer above FinP, lexicalizing either a higher C head Force (2b) or a light demonstrative head *d* under factive predicates (2c).

(2) a. [$_{\text{FinP}}$ Fin = Ø]] null COMP
    b. [$_{\text{ForceP}}$ Force = *that* (Topic) … (Focus) [$_{\text{FinP}}$ Fin = Ø]] overt COMP
    c. [$_{d\text{P}}$ *d* = *that* [$_{\text{FinP}}$ Fin = Ø]] overt COMP

To support our claim that Force is not projected when the COMP is null in (2a), we assume that (*i*) English has no lexical item to spell out Fin with [+finite], whereas Fin with [-finite] may be spelled out as *for*, and (*ii*) the COMP *that* originates as a demonstrative (Roberts & Roussou 2003). Building on these, we propose that the Force head lexicalized as *that* has a *d*-(*eictic*) feature. To show also how a null *that* clause is interpreted as a declarative sentence when Force is not projected in (2a), we adopt Roberts (2008) who argues that ForceP is either absent or inert in root declaratives, suggesting root declaratives are the unmarked clause type. We further expand this view and propose that declaratives are the unmarked clause type in both root and embedded clauses (in English): declarative force may not be encoded on Force per se, but is granted as the unmarked sentence type at the level of FinP. On the other hand, the information delivering other sentence types than declaratives, such as interrogatives, is encoded on Force by their relative features, for instance [+wh]. On this assumption, the label of Force seems to be misleading and we re-label it as Assert, following Hooper & Thompson (1973), who argue that *assertion* is the crucial property that licenses MCPs in embedded clauses.

(2) b′. [$_{\text{AssertP}}$ Assert = *that* (Topic) … (Focus) [$_{\text{FinP}}$ Fin = Ø]] overt COMP

The structures in (2a, b′) explain why MCP are permitted only when the COMP is overt. When a predicate selects a clausal complement/CP, it must be either FinP or AssertP, whose head corresponds to C. Projecting Topic and/or Focus is *optional*, expressing the information structure of a clause, and neither TopP nor FocP are qualified to be a complement of a predicate, which cannot be optional; when TopP or FocP is projected above FinP in (2a), it cannot be directly selected by the matrix predicate, explaining why MCPs are banned in a null *that* clause in English.

To account for the obligatoriness of *that* as well as the unavailability of MCP in factive clausal complements, we propose the structure in (2c). Both the Assert head in (2b′) and the *d* head in (2c) are spelled out as *that*, but they are different in nature: *that* in (2b′) is a COMP whereas *that* in (2c) is a demonstrative. Thus, the *d*P structure in (2c) supports the widely-head view that the clausal complement of a factive predicate is nominal in nature (KK and inter alia). A factive predicate selects a nominal complement, a *d*P, whose head is lexicalized by *that*. On the other hand, a non-factive predicate selects a clausal complement, either a FinP or an AssertP. When it selects a FinP, the complement is null-headed. When it selects an AssertP, it leads to an overt *that* clause. In addition, we argue that *that* in (2c) is a weak, light demonstrative lacking ϕ-features, whereas a strong demonstrative *that* has ϕ-features. Our claim that *that* in (2c) is a light or weak demonstrative lacking ϕ-features is supported by cross-linguistic evidence from Korean, in which the COMP *ko* may be used as a ϕ-feature/number lacking demonstrative. Also our proposal that the *d* head lexicalized as *that* in (2c) is a light, ϕ-feature lacking head has a consequence in syntactic derivations, explaining the unavailability of MCP.

Based on word order in French and Hungarian nominals, Ihsane & Puskás (2001) propose a split DP structure in (3), in which demonstratives are [+specific, +definite], merge under Def and move up to Topic.

(3) Det(erminer)P … (Topic) … (Focus) … Def(inite)P

If the distinction between strong and weak demonstratives is real in English, and due to the lack of certain features, such as ϕ-features, the weak demonstrative *that* in (2c) does not move in the course of the derivation but remains in situ, whereas strong demonstratives move further up to Topic (or even higher), this means that the *d*P in (2c) is lower than Topic and Focus. In other words, Topic and Focus may optionally appear *above d*P, not between *d*P and FinP in (2c). Yet, topicalization is not possible above *d*P, as shown in (4). As explained earlier to account for the unavailability of MCP in a null *that* clause (2a), neither TopP nor FocP can be directly selected by the matrix predicate, explaining the ungrammaticality of the sentence in (4).

(4) *John knows/realizes/regrets **vegetables* that Mary doesn't eat

Finally, we show that our proposal in (2) successfully accounts for the distribution of overt and null COMPs beyond clausal complements, such as sentential subjects, and extend it to various other languages, which may or may not allow a null COMP in similar contexts.

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On the unobservability of structure:
Perception of phonology vs. phonetics in experimental data

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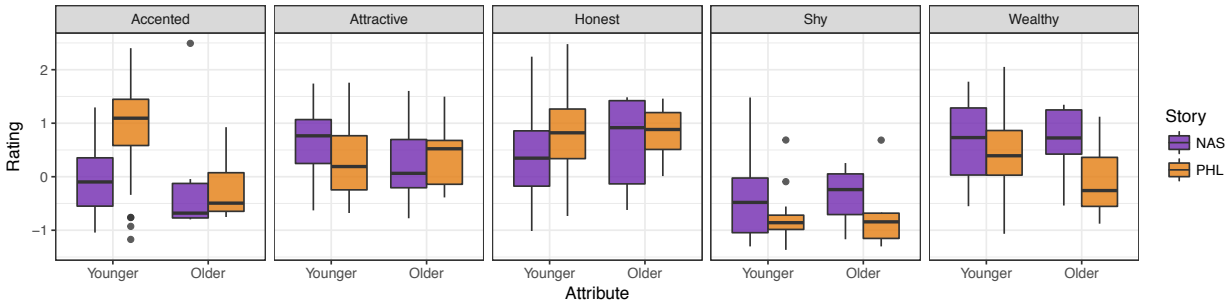
The ability of speakers to identify structural variables, such a phonological rule, has been the topic of some debate. Labov (1993) argues that linguistic structure is unobservable and that it is instead only the phonetic output that is subject to social evaluation. More recent work (Campbell-Kibler 2007, Dinkin 2015) carries this argument further with the assertion that listeners attach social meaning to the variant itself (such as the use of "like" across the different variables of quotatives and discourse markers), regardless of the structural composition of the variable. Philadelphia English provides a unique opportunity to test the observability of phonology, as it is currently undergoing an allophonic restructuring in the TRAP-MAN allophonic split (Labov et al. 2016), with younger speakers abandoning the local Philadelphia system (henceforth: PHL) in favor of the more geographically widespread Nasal system (henceforth: NAS). The difference between PHL and NAS is mainly found in four conditioning factors, outlined in Table 1. Crucially, both PHL and NAS produce phonetically tense and phonetically lax allophones; the main difference is in the structural conditioning factors that govern whether a word is produced as tense or lax.

	Conditioning Factor			
	Lexical mbg (e.g. "mad")	Fricative (e.g. "class")	nVn (e.g. "manage")	Engma (e.g. "hang")
PHL	**Tense**	**Tense**	**Lax**	**Lax**
NAS	**Lax**	**Lax**	**Tense**	**Tense**

Table 1: Conditioning factors that differ between PHL and NAS

In this paper, we test the observability of structure through two perception experiments. 68 participants from Philadelphia completed both experiments. The first experiment is a controlled matched guise task in which participants heard a story, wherein words containing /æ/ were manipulated to conform to PHL in the Philly condition and NAS in the Nasal condition. In both conditions, participants were exposed to the same number of tense and lax tokens; the only difference was in the phonological conditioning factors governing the tense-lax split. Participants were then asked to rate the speaker along a number of social attributes.

Figure 1: Attribute ratings by story condition and age of participant



Results from Experiment 1 are shown in Figure 1. A fixed-effects regression model with Story Condition and Age of Participant as main effects was run separately over each attribute to determine whether the evaluation of /æ/ system changed across age group. We find a main effect

for four social attributes, with PHL rated as more "Accented" (p=.003) and "Honest" (p=.03), and NAS rated as more "Shy" (p=.03) and more "Wealthy" (p=.04). We find an interaction effect for "Attractive", with younger participants rating NAS as more attractive (p=.04). These results suggest that listeners do in fact attend to structural factors like allophonic system in their evaluation of speech, contra Labov (1993).

The second experiment was designed to test whether participants evaluated tokens differently based on their phonological conditioning environment. Experiment 2 was a modified magnitude estimation task, in which participants were asked to rate individual words for how "well pronounced" they sounded relative to a reference word. Each participant was played an equal number of lax and tense words from each conditioning factor, for a total of 48 target words per participant and 48 fillers. Responses were z-scored by participant.

Figure 2: 'well–pronounced' rating, by conditioning environment and phonetic production

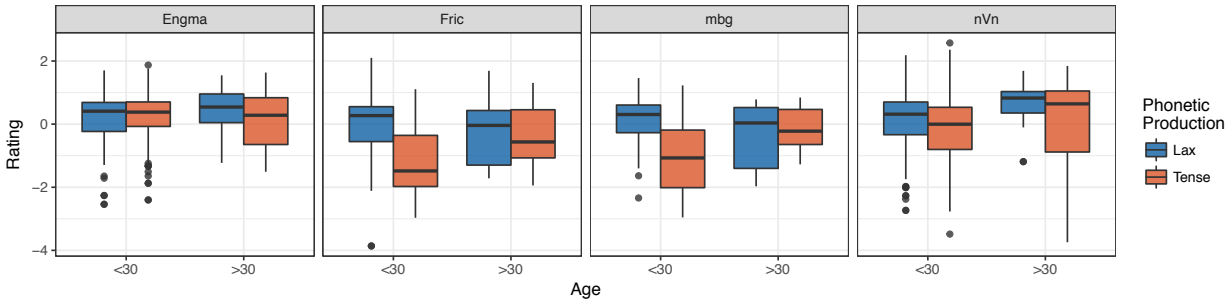


Figure 2 depicts the results of the results of the Magnitude Estimation task, broken down by conditioning factor, tenseness value, and age of responder. A fixed-effects regression model with was run separately over each conditioning factor to determine whether the evaluation of tense and lax production has changed between the older and younger participants. We find interaction effects such that older participants downgrade tense nVn (as in "manage", p=0.3) and tense engma (as in "hang", p=.04), while younger participants downgrade tense mbg (as in "mad", p=.01) and tense fricatives (as in "class", p=.01). In other words, older speakers downgrade NAS tense tokens but not NAS lax tokens. Likewise, younger speakers downgrade PHL tense tokens but not PHL lax tokens. These results suggest that what may look like phonetic evaluation when considering age groups separately is actually more complicated: participants do attend to underlying allophonic system, only downgrading the tense tokens of the allophonic system that is less widespread within their age group.

Taking the results of both experiments into account, we conclude that abstract linguistic structure is subject to speaker evaluation. Furthermore, these results highlight that while phonetic versus phonological effects may be confounded in synchronically stable data, these effects may be distinguished using data from a period of phonological change.

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Alternatives to conversion: Interactions between allomorphy and allosemy

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1. Introduction. In Distributed Morphology, 'irregular' morphology is the product of allomorphy rules which apply to $\sqrt{\text{roots}}$ in a morphological structure. For example, the rule in (1a) targets $\sqrt{\text{mouse}}$, leading to realisation as *mice* in the specific context of PLURAL. (1b) shows an equivalent derivation of *worse* from $\sqrt{\text{bad}}$, based on Bobaljik's (2012) study of comparative adjectives. (Note in both derivations the suffixes are realised as null allomorphs.)

(1) a. $\sqrt{\text{mouse}}$ → /maɪs/ / __ PLURAL (ie. *mouse* → *mice*)
b. $\sqrt{\text{bad}}$ → /wɜ(ɹ)s/ / __ CMPR (ie. *bad* → *worse*)

I examine cases where, if a root has some atypical interpretation, such rules may fail to apply:

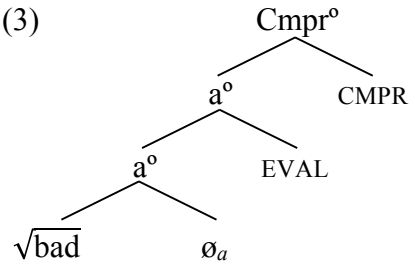
(2) a. *mouse* → *mice*
bad → *worse*
man → *men*

b. *mouse* → *mouses* (for computers)
bad → *badder* (if bad actually means 'good')
walkman → *walkmans*

2. Conversion and non-locality. As the study of allomorphy has developed in DM, explanation of why these rules *fail* to apply have followed similar logic, in which additional derivational structure causes a non-locality effect (eg. Ackema & Neeleman 2004; Arregi & Nevins 2014).

Arregi & Nevins, for example, propose $\sqrt{\text{bad}}$ may be *converted* to mean 'good' by an EVALUATIVE morpheme before affixation by an abstract COMPARATIVE morpheme (3). The rule in (1b) then cannot apply as the presence of this additional morpheme means the rule's context is not met, leading to 'elsewhere' (ie. regular) spellout of the root (and comparative affix).

(3)



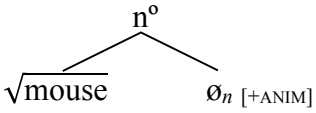
3. Issues with conversion. I suggest structures like (3) are not strictly in adherence with DM principles of *allosemy*, in which first categorial head attached to a root limits the domain of allosemy (Marantz 1997; Arad 2005). Note that in (3), as the comparative affix only merges with adjectives, the root is categorised low in the structure, even though it is the combination of (at least) the root $\sqrt{\text{bad}}$ and the EVALUATIVE morpheme which results in a 'special' meaning.

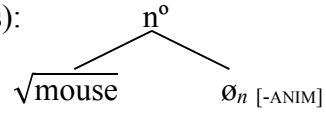
Furthermore, though (2) shows allosemy may impede the application of irregular allomorphy, comparable decomposable and non-decomposable structures exist which show no such effect:

(4) *walkman* → *walkmans* non-decomposable , 'regular' morphology
policeman → *policemen* decomposable, irregular morphology
hitman → *hitmen* non-decomposable, irregular morphology

4. Categorisation and allosemy. If there is no straightforward correlation between non-decomposability and irregular allomorphy, a simple generalisation can still be identified: *allomorphy is maintained when allosemy is maintained*. That is, the *man* → *men* rule applies to *policeman* and *hitman* as these derivations refer to a man, but not to *walkman* as the structure does *not* refer to a man. The same logic applies to *mouse* → *mice*, but *mouses* (for computers).

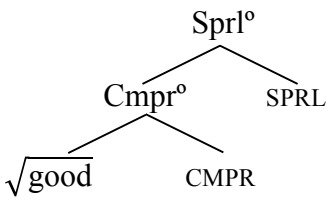
I thus propose that derivations in (2b) do not require additional structure, but that their interpretations are derived simply by applying a different categorial morpheme to the root as in (2a). Given that these categorial affixes are null, I distinguish the morphemes applying to $\sqrt{\text{mouse}}$ or $\sqrt{\text{man}}$, for example, by representing them with [±ANIMATE] features. (Different contrasts would be exploited to distinguish *worse* from *badder* and other such cases.)

(5) a. *Mouse*: 

b. *Mouse* (for computers): 

5. Locality of allomorphy. Moskal (2015) argues that for irregular plural morphology to apply to nouns (as in derivation of *mice* and *men*), allomorphy rules must apply over categorial morphemes. Similarly, Bobaljik's analysis of ABC allomorphy patterns shows root allomorphy may be conditioned by a morpheme that is not the immediate category affix:

(6) Latin √good, undergoes allomorphy conditioned by a non-local SUPERLATIVE morpheme



bonus → *optimus*('good' → 'superlative')

√good → *bon*

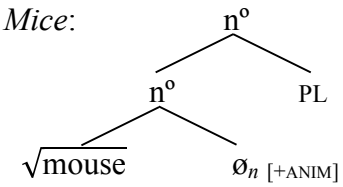
√good → *opt* __ CMPR] SPRL

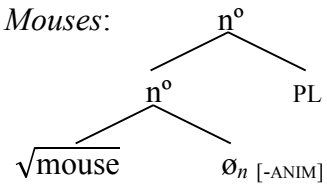
(cf: SPRL → -im ; *-us* is a gender/number suffix)

6. Allomorphy and allosemy. In the same way that the context of the rule deriving *opt* from √good in the context of SPRL must refer to the CMPR morpheme, rules faithful to Moskal's study of irregular plurals (which are more precise than (1)) should reference a categorial morpheme:

(7) √mouse → /maɪs/ / __ ø*n* [+ANIM]] PLURAL (ie. *mouse* → *mice*)

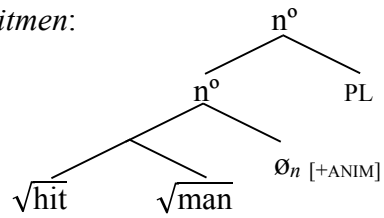
Thus, √mouse pluralises irregularly in (2a), but not (2b), as rule (7)'s context is only met in structure (8a). The *different* categorial morpheme in (8b) prevents the rule from applying:

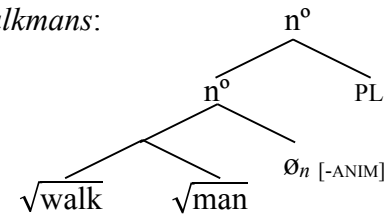
(8) a. *Mice*: 

b. *Mouses*: 

The same principle applies to the compounds in (4) if, following Harley (2009), non-decomposable 'root compounds' are composed of two roots, categorised together. By having the same morpheme categorise √man in the derivation of *man* → *men*, as well as *hitman* → *hitmen*, the same rule, ie. (9), may condition irregular allomorphy in (10a), but not (10b).

(9) √man → /mɛn/ / __ ø*n* [+ANIM]] PLURAL (ie. *man* → *men*)

(10) a. *Hitmen*: 

b. *Walkmans*: 

7. Conclusion. Attributing allosemy to different categorial morphemes, rather than additional conversion morphemes, is more in-line with established principles of DM. Moreover, though, such an approach provides a uniform analysis of how allosemy influences irregular allomorphy.

References: **Ackema**, P & A **Neeleman**. 2004. *Beyond Morphology* / **Arad**, M. 2005. *Roots and patterns* / **Arregi**, K & A **Nevins**. 2014. *A monoradical approach to … disuppletion* / **Bobaljik**, J. 2012. *Universals in comparative morphology* / **Harley**, H. 2009. *Compounding in DM* / **Marantz**, A. 1997. *No escape from syntax…* / **Moskal**, B. 2015. Limits on Allomorphy.

The Noun Phrase in Central Kurdish: A Projection of D (DP) not Num (NumP)

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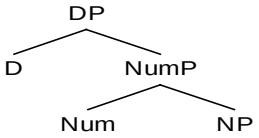
This paper proposes that the noun phrase in Central Kurdish (CK, henceforth) is in fact a projection of the functional category (D), rather than number (Num). Although the surface form suggests that the functional projection of number (NumP) is above DP in the structure, I argue that the noun phrase proper still has a DP projection above it.

Based on typological data from a wide range of languages, Rijkhoff (2002) claims that referentiality elements such as the definite marker (D) takes scope over, hence is structurally higher than quantity elements such as number (Num), as shown in (1).

(1)



Likewise, the standard cross-linguistic structural relation between NumP and DP is that the former falls with the scope of the latter, i.e. DP is structurally higher than NumP (see Aboh 2004 and Ritter 1991, among many others). Furthermore, according to the current generative approach, DP is structurally parallel to CP where D corresponds to C, and NumP is parallel to TP (or AspP). Thus, if it is true that CP is cross-linguistically located above TP in the clausal domain, DP should be above NumP in the nominal domain, not the other way round.

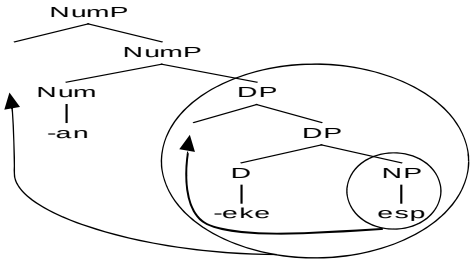
On the face of these proposals, the hierarchical structure in the CK noun phrase seems to be a counterexample where DP falls within the scope of Num, posing a serious challenge to the above well-established generalizations. The plural number marking in CK is realized by the enclitic *-an* attaching to the definite marker *–eke* which, in turn, attaches to the noun (2a) or to the end of postnominal modifiers (2b).

(2) a. esp-eke-an
horse-DEF-PL
'the horses'

b. esp-e zil-eke-an
horse-LNK big-DEF-PL
'the big horses'

The current study adopts the non-lexicalist approach to morphology (Halle and Marantz 1993; Marantz 2001) and Chomsky's (1995) Minimalist bottom-up derivational theory. Thus, observing the example in (2a), I take the nominal projection (NP) *esp* 'horse' to be the first element merging in the structure. This is followed by merger of the two functional categories D and Num, respectively (see 3). The D is realized by the definite article *–eke* while Num is spelled out by the plural marker *–an*. The NP, then, moves in a pied-piping fashion to Spec NumP, picking up both *-eke* and *-an* en route, as follows.

(3)



Given this structure, the category D where *-eke* is realized is structurally lower than the functional projection of number (Num), suggesting that the CK noun phrase is hierarchically represented as NumP, not as DP. This contention militates against all the standard assumptions raised above. However, I argue that the NumP in (3) still falls under another DP projection where the D category is null in constructions such as (2a, b), but morphologically realized in some situations by the definite marker *–e*. I provide empirical evidence that the morpheme *–e*, which co-occurs with demonstratives (4a, b), is the syntactic realization of definiteness, serving a similar function to the main definite marker *–eke* (2a, b).

(4) a. em esp-e
this horse-DEF
'this horse'

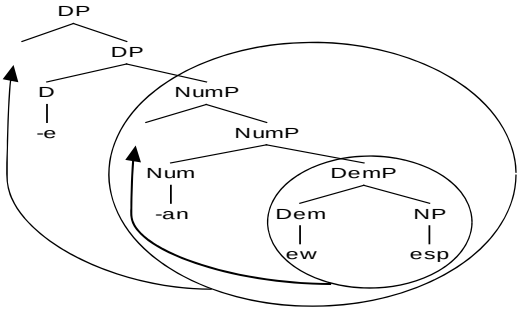
b. ew esp-an-e
that horse-PL-DEF
'those horses'

c. ew esp-e zil-an-e
that horse-LNK big-PL-DEF
'those big horses'

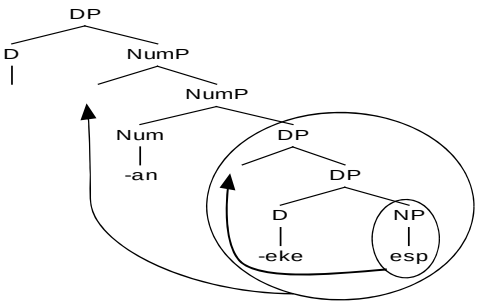
As expected, the plural number marker *–an* occurs inside the definite marker *-e* (4b), indicating that the D where *–e* is realized is above the functional category of number (Num) where *–an* is realized (see 5a). Comparing the structure in (5a) to (3) where the noun phrase is a projection of number (NumP) with DP below it, I argue that the NumP in (3) still falls under a second DP layer where the D is not realized, as shown in (5b).

(5)

a.



b.



As for its function, this unpronounced D category above NumP (5b) is argued to provide double definiteness to the noun phrase, a phenomenon which is common in CK and several other languages including Hebrew, Norwegian and Swedish (see Danon 2008; Julien 2003, 2005).

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Multiple subjects across categories: Evidence from Modern Standard Arabic

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1. Introduction The focus of our talk is a particular type of *tough*-construction in Modern Standard Arabic (MSA), illustrated in (1)-(3). In these examples we see a DP (bracketed), followed by an adjective (underscored) and a deverbal noun. Attached to this last element is a resumptive pronoun (RP) which is corefential with the DP. When construed predicatively, such structures can either be full root clauses (1), or complements of ECM-predicates like *believe* (2). In addition, MSA *tough*-constructions can also be used attributively, in which case the adjective (together with its complement) acts as a nominal modifier (3).

(1) [hāḏā l-kitābu]$_i$ mumtiʿun qirāʾatu-hu$_i$
this the-book.M.SG.NOM pleasant.M.SG.NOM read.F.SG.NOM-RP.M.SG
'This book is pleasant to read.' (= predicative reading, root clause)

(2) ẓanantu [[l-ʿimārata]$_i$ / [l-ʿimāratāni]$_j$ [sahlun
I.believed the-building.F.SG.ACC / the-building.F.DU.ACC easy.M.SG.NOM
bayʿu-hā$_i$] / bayʿu-humā$_j$]]
sell.M.SG.NOM-RP.F.SG / sell.M.SG.NOM-RP.F.DU
'I believed that the building was/the two buildings were easy to sell.' (= predicative reading, embedded clause)

(3) [[al-ʿimāratu]$_i$ [ṣ-ṣaʿbu bayʿu-hā$_i$]] bīʿat ʾaḫīran
the-building.F.SG.NOM the-difficult.M.SG.NOM sell.M.SG.NOM-RP.F.SG was.sold finally
'[The building which is difficult to sell] was finally sold.' (= attributive reading, DP)

A key property of these structures concerns the agreement morphology on the adjective. In MSA, attributive and predicative adjectives canonically agree with their head noun or subject. However, as can be deduced from (2) and (3), the adjective in *tough*-constructions does not agree in number, gender or case with the lefthand DP, but rather it appears with 'default' nominative masculine singular morphology. Even if the initial DP is dual or plural, the adjective exhibits singular inflection (2). This lack of agreement clearly shows that the examples in (1) to (3) are not derived from a structure like (4), in which the adjective obligatorily agrees with the preceding DP.

(4) qirāʾatu-hu mumtiʿ**at**un / ḍarūriyy**at**un
read.F.SG.NOM-M.SG pleasant.F.SG.NOM / necessary.F.SG.NOM
'Its reading is pleasant/necessary.'

2. Multiple subjects Our main goal is to analyse the internal structure of both the predicative and attributive patterns illustrated in (1)-(3), with special reference to (i) the lack of agreement of the adjective/participle and (ii) the status of the initial DP. First, to account for the observed lack of agreement between the DP and the adjective, we adopt Mohammad's (1990, 2000) suggestion that the 'default' agreement which can be observed in a number of (impersonal) constructions in MSA is due to the presence of a (phonologically null) expletive subject. We take this expletive pronoun to be located in SpecTP, where it agrees with the adjectival predicate. Next, following among others Cardinaletti (1997, 2004) and McCloskey (1997), we will assume that in a given extended projection, there is more than one position for subjects. On top of the first merge position where a given subject receives its theta-role, there is first of all TP, which is the locus where subject-verb agreement is configured. In addition, there also is a higher projection SubjP, in whose specifier subjects are hosted which receive an 'aboutness' interpretation (without necessarily qualifying as discourse topics).

We take it that in MSA *tough*-constructions, the initial DP occurs in Cardinaletti's (2004) SubjP. Interestingly, there is independent evidence that in MSA (as well as in many other languages) two clause-mate subject positions can be filled simultaneously by non-coreferring XPs. This is the case in the 'broad subject' pattern discussed in e.g. Alexopoulou et al. (2004) (not illustrated for reasons of space).

3. Against a topicalization analysis As SpecSubjP is an A and not an A'-position, we predict the subject of SMA *tough*-constructions not to be associated with a specific discourse function ('topic' or 'focus'), beyond the aboutness interpretation which (preverbal) subjects receive by default. In particular, although just like left-dislocated constituents the subject of a *tough*-construction also obligatorily occurs with a resumptive pronoun, CLLD topics and subjects of *tough*-constructions can be shown to have very different properties. For instance, in MSA bare QPs are acceptable as the subject of a *tough*-construction (5), but they cannot be left-dislocated (see e.g. Aoun et al. 2010: 197).

(5) walā wāḥidun mufīdun qirāʾatu-hu
no one.NOM.M.INDF beneficial.M.SG.NOM read.F.SG.NOM-RP.M.SG
'None is beneficial to read.'

4. Towards a unified analysis We can now proceed to offer a unified account of the three types of *tough*-constructions illustrated in (1)-(3). With Den Dikken (2006) we assume that all subject-predicate relations instantiate a basic schema involving an abstract RELATOR, which can be realized by a variety of functional categories. In our cases, subjects appear as the specifier, and predicates as the complement of this RELATOR, as in (6). In all of (1)-(3), the basic pattern in (6) is represented twice, with the lower RP itself being the complement (i.e. predicate) of a higher RELATOR. The full structures of (1)-(3) are given in (7):

(6) $[_{RP}\ [_{XP}\ \text{SUBJECT}]\ [_{R'}\ \text{RELATOR}\ [_{YP}\ \text{PREDICATE}]]]$

(7) a. $[_{CP}\ [_{C'}\ [_{SubjP}\ DP_i\ [_{Subj'}\ [_{TP}\ pro_j\ [_{T'}\ [_{AP}\ [_{A'}\ A_j\ [_{VP}\ V{=}pro_i\ ]]]]]]]]]$ predicative, root
b. $[_{SubjP}\ DP_i\ [_{Subj'}\ [_{TP}\ pro_j\ [_{T'}\ [_{AP}\ [_{A'}\ A_j\ [_{VP}\ V{=}pro_i\ ]]]]]]]$ predicative, ECM
c. $[_{DP}\ [_{D'}\ D\ [_{RP}\ NP_i\ [_{R'}\ [_{TP}\ pro_j\ [_{T'}\ [_{AP}\ [_{A'}\ A_j\ [_{VP}\ V{=}pro_i\ ]]]]]]]]]$ attributive

In each case, the lower RELATOR is of category T, with a (null) *pro*-subject in SpecTP, and an AP-complement. What differentiates the three patterns is the structure above TP. As hinted at earlier, in the predicative cases (7a,b) the higher RELATOR is Subj (with the DP in its specifier), which in the case of root clauses is dominated by a (full) CP-layer ((1) = (7a)). In the case of the ECM-configuration ((2) = (7b)) we can take SubjP to be the highest layer of the embedded clause. Finally, the attributive pattern can be analysed as involving a nominal category modified by a (participial) reduced relative clause ((3) = (7c)). This configuration too can be taken to involve some type of RELATOR (the exact nature of which remains to be determined, cf. Den Dikken 2006: 242), which appears with an NP subject and an AP predicate, and which is dominated by a D-layer.

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Shades of negative concord in dialects of Scots

Gary Thoms, David Adger, Caroline Heycock and Jennifer Smith

Zeijlstra (2004) argues that there is a dichotomous split between languages which do and do not have negative concord (NC). We argue that this dichotomy is too simplistic: languages exhibit "NC-ness" to different degrees, with some more types of NC being more 'peripheral' than others. Evidence comes from judgment and usage data from dialects of Scots.

NC in Scots. It's well-known that nonstandard dialects of English show three-way variability with negatively dependent direct objects between NC (1a), neg-NPI structures (1b) and negative quantifier structures (NQs, 1c), with negative direct object; in this respect these dialects differ from regular NC languages like Italian and Russian, which do not have strategy (1c). Using both production and judgement data we show that dialects of Scots differ further from regular NC languages in several ways, although this is not uniform across speakers.

Examination of **judgement** data gathered from 371 speakers of Scots in the *Scots Syntax Atlas* shows three main points: (i) there is a role for focus: 18% of speakers only accept NC with objects if there is focus on the object (using pairs like 3a,b); (ii) there is a role for argumenthood: a subset of speakers only allow NC with objects, rejecting it when there is NC on an adverbial; 13% accept 3a while rejecting 4a, where both involve focus; 22% accept 3b while rejecting 4b, where there is no focus; (iii) NC in existentials, where the two negative forms are adjacent, is rejected by 22% of speakers who accept it with direct objects (3b vs 5a); (iv) there is a subset of speakers (15%) who accept NC with negative pronouns but not with full NPs (3b vs. 5b). We discuss the test examples and provide support for the existence of the different systems from in-depth investigations of individual speaker judgements.

1. a. I didn't see nothing. b. I didn't see anything. c. I saw nothing.
2. a. I didn't see it nowhere. b. I didn't see it anywhere.
3. a. I can't see nothing. b. They don't sell nothing like that.
4. a. I can't see nothing nowhere. b. I didn't see it nowhere.
5. a. There wasn't nobody there. b. I didn't see no shoes.

We show that the facts from judgements line up with **production** data in two ways. (i) there is a greater concentration of the NC-positive speakers (those who accept all of 3-5) in locations where we have found attested examples of NC in production data. This is further supported by evidence from two larger corpora: in Buckie (north east Scotland), NC rates are 57% overall (Smith et al to appear) and there is a high rate of acceptance of 3-5, whereas in the Glasgow area NC is only produced at a rate of 8% (Childs 2016) and the more restricted NC systems are attested more commonly. (ii) the high overall percentage of NC for Buckie masks very different rates of use for certain configurations: 63% with proforms, 31% with NPs, and 1% in existentials. These quantitative results seem to correspond to some of the judgement data patterns: a substantial penalty on NC with full NPs (5b) and a bigger penalty on NC with existentials (5a), although NC rates with *nowhere* are just as high as with *nothing*.

Other NC effects. One might contend that there is still a line to be drawn between +/-NC languages, with standard English being on one side and the +NC dialects like Buckie on the other. However even speakers who reject classical NC of the 3-5 type accept negative dependencies which look like NC. Consider "squatitives" (Horn 2001): this is a class of nominal like *squat* and *fuck all* which have an NQ-like meaning when used in isolation but which may co-occur with clausal negation without giving rise to a DN reading (6b). Squatitives behave much like n-words otherwise: the locality conditions under which they may have a concord reading are the same ones which restrict cross-clausal NC in productive NC dialects like Buckie, i.e. across neg-raising verbs only (8a; Collins and Postal 2014), and they resist modification by *absolutely* when in concord, which indicates the squatitive is not the locus of negation in these cases. But they also behave like regular NQs, in that they can scope above and below modals, 8b. Most speakers who use squatitives allow the NC reading.

6. a. He saw (absolutely) fuck all. b. He didn't see (*absolutely) fuck all.

7. a. He said (absolutely) nihin. b. He didna say (*absolutely) nihin.
8. a. I didn't/didna {*say/think} you saw fuck all. b. You can do fuck all about that either.

One possible analysis is to say that squatitives have both NQ forms and NPI forms, with the latter occurring in the so-called concord cases but requiring syntactic licensing (cf 8a). But why do we find this polysemy with this narrow class of expressions and not with regular NQs like *nothing* in non-NC dialects? An important difference is that *nothing* varies with an NPI form *anything*, but squatitives don't. An alternative analysis, then, is that *all* NQs have syntactically licensed NPI forms; it just so happens that for standard dialects the NPI version of an NQ is as an *any* form, whereas in other dialects it's a *no* form. On this analysis, syntactically licensing an NPI *is* NC, and variation in NC is largely a matter of variation in exponence, a kind of lexical variation (Tubau 2016). This fits with the picture from Scots.

NQs and uNEG. Recall that most cases of NC are involved in three-way variability with the NQ strategy and a neg-NPI strategy, 1. We propose that all three of these structures are essentially instantiations of the same underlying syntactic structure in which a negatively marked indefinite bearing an uNEG feature enters into an Agree relation with a higher iNEG on the clausal negator: in 1a,c the uNEG on D spells out as *nothing* and in 1b it is realized as *anything*. This is effectively an NPI analysis for all three elements (cf Penka 2007).

9. [TP… [NegP iNEG … […. [DP uNEG]]]]

Importantly, 9 is not the only analysis for all of 1a-c, as examples with NQs (1c) are ambiguous between high and low scopes for negation. We argue (following Penka 2007) that the low scope reading corresponds to a structure where iNEG is on D and the DP is a true negative indefinite, as diagnosed by e.g. *absolutely* modification. On this approach, "Negative Concord" is the name given to certain exponence patterns for structures like 9, in particular those like 1a but also 6b. In both cases, the form which is the spellout of the lower uNEG (*nothing*, *fuck all*) is also potentially a spellout of an iNEG. This means the input with simple NQs like 1c is ambiguous, whereas it is unambiguous with 1a,b. We claim that this ambiguity in the input is the key to the variability across grammars.

First consider Buckie, where NC is high in the input: learners are exposed to unambiguously uNEG forms of all n-words, and so they acquire "NC-positive" grammars by associating the relevant lexical items (*nowhere*, *nothing*) with uNEG. We assume that the different exponents of a given D/uNEG pairing are associated with probabilities based on the input, and this influences (but does not completely determine, cf. Smith et al 2013) the learner's production; thus high rates of uNEG->*nothing* in the input will typically result in a grammar which realizes NC with *nothing* frequently. Crucially, this means that it's not only the rates of NC forms like 1a in the input that will determine the learner's own NC rates with it, but also rates of NQs of that kind in the input as well, since these are also analysable as involving the configuration in 9 in most cases; that us, hearing 1c will lend weight to the uNEG->*nothing* rule which is involved in deriving 1a, thus boosting NC rates for that form. We propose this may account for part of the pronoun vs full NP difference in Buckie NC rates.

Now consider communities with lower levels of NC in the input such as Glasgow: the *any* realisation of uNEG dominate, and forms like 1a are very infrequent, so there will be very little evidence in the input for associating uNEG with n-forms. However examples like 1c do provide evidence for associating uNEG with n-forms, and so NQs in the input will boost for n-words which appear infrequently as NQs. What's important is that this predicts that there will be a boost for negative pronouns like *nothing* and *nobody*, which are common as NQs, but little to no boost for n-words which are a lot less frequent in the input as NQs, such as *nowhere* (which only occurs in existentials and fixed expressions in our corpora) and the determiner *no*. As for existentials, we argue that NQs in existentials are typically analysed as iNEG and not uNEG, and this because they are analysed as occurring in Spec,NegP after *Neg-Shift* (Haegeman et al 2014).

Gender resolution rules in Polish revisited

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In Polish, coordination of conjuncts of different genders is predominantly handled by resolution (Corbett, 1991; Zbróg, 2012). Among Corbett's (1991) examples of predicate agreement in Polish where resolution rules apply is (1), where the coordinated NPs resolve to the masculine-personal gender (M1).

(1) mama, córeczka i wózek **ukaza-li** się nagle
mother.F, daughter.F and pram.M3 showed-M1.PL REFL suddenly
'The mother, daughter and pram appeared suddenly.'

A traditional view holds that Polish has three grammatical genders: masculine, feminine and neuter (Klemensiewicz, 1952). This view is challenged by Mańczak (1956), who proposes a model of five gender classes in Polish, widely accepted among contemporary linguists (cf. Kucała, 1976; Swan, 1988; Corbett, 1983, 1991; Przepiórkowski, 2003). These classes include: masculine-personal (M1), masculine-animate (M2), masculine-inanimate (M3), feminine (F) and neuter (N) (Mańczak, 1956). This distinction is based on forms of adjectives in the accusative case for both singular and plural, as shown in Table 1, which means that these five genders are syntactic rather than semantic classes[1]. M1, M2 and M3 are called "masculine" because they all trigger the same agreement forms for adjectives in the nominative singular and for verbs in the past tense singular; cf. Table 2.

Gender	Singular		Plural	
Masculine-personal (M1)	**dobrego** 'good-ACC'	mężczyznę 'man-ACC'	**dobrych** 'good-ACC'	mężczyzn 'men-ACC'
Masculine-animate (M2)		psa 'dog-ACC'	**dobre** 'good-ACC'	psy 'dogs-ACC'
Masculine-inanimate (M3)	**dobry** 'good-ACC'	stół 'table-ACC'		stoły 'tables-ACC'
Feminine (F)	**dobrą** 'good-ACC'	kobietę 'woman-ACC'		kobiety 'women-ACC'
Neuter (N)	**dobre** 'good-ACC'	dziecko 'child-ACC'		dzieci 'children-ACC'

Table 1: Paradigm of the adjective *dobry* 'good' in the accusative (Mańczak, 1956).

Mańczak's (1956) system is a pillar of descriptive gender resolution rules formulated by Corbett (1983). Corbett (1983) explains that in Polish, in the subject-verb gender agreement in the plural, there is a division into the M1 gender and the remainder (∼M1). As shown in Table 2, in the plural, we have complete syncretism except for the M1: when the subject is a member of the M1 category, it requires its predicate to take the ending *-i*, as in *byli*; otherwise the ending *-y*, as in *były*, is imposed on a predicate by its subject. The M1 and ∼M1 categories are also used in gender resolution. Polish gender resolution rules proposed by Corbett (1983) are listed in (2). For instance, the M1 verb form in (1) comes from Rule 2. The conjuncts *mama* 'mother' and *córeczka* 'daughter' include the semantic feature PERSONAL, while *wózek* 'pram' has the syntactic feature MASCULINE. According to Rule 2, these two features together can yield the M1 agreement form.

[1]For example, the masculine-animate (M2) class includes many nouns that are not semantically animate, e.g. *papieros* 'cigarette'.

(2) Rule 1. if the subject includes a masculine personal conjunct, the predicate will be in the M1 form;
Rule 2. (optional) if the subject includes the features masculine and personal, whether these are syntactic or semantic, the predicate may be in the M1 form;
Rule 3. (optional) if the subject includes a masculine animate conjunct, the predicate may be in the M1 form;
Rule 4. otherwise, the predicate will be in the ∼M1 form.

Gender	Singular	Plural
Masculine-personal (M1)	był	byli
Masculine-animate (M2)		były
Masculine-inanimate (M3)		
Feminine (F)	była	
Neuter (N)	było	

Table 2: Predicate agreement forms of *być* 'be' in the past tense and the third person singular and plural in Polish according to Corbett (1983).

Gender resolution rules for Polish in (2) are not exhaustive. For example, Corbett does not explain whether Rule 3 applies only to syntactically masculine nouns being semantically animate or whether it includes syntactically masculine animate nouns being semantically inanimate, e.g. *walc* 'walz'. What is more, Corbett's rules do not seem to be supported by a sufficient amount of data. They are based merely on the results of a small questionnaire of grammaticality judgements conducted by Zieniukowa (1979). Therefore, the aim of our study was to verify with a substantial corpus data sample whether Corbett's gender resolution rules for Polish were exhaustive or whether they needed to be revisited.

5,077 corpus entries, tagged with morphosyntactic information, were collected from the National Corpus of Polish (NKJP)[2]. The targeted data involved pairs of coordinated nouns in all possible gender combinations followed by a verb: we searched both for entries where the form of the verb was M1 and for entries where the form of the verb was ∼M1.

Our analysis of the corpus data has revealed that Corbett's rules are neither comprehensive nor accurate. First, they ignore an order of conjuncts in a coordinated NP. Second, they do not take into account semantic features such as collectivity, generic person and lack of specified semantic gender[3], all of which can trigger different forms from those predicted by the rules in (2), as data from the corpus suggests. Based on the analysed data, we propose a thoroughly revised version of descriptive gender resolution rules for Polish. They predict possible forms of verbs taking into account the presence of the semantic features collectivity, generic person and lack of specified semantic gender. Our rules also state clearly when a particular resolved form is triggered by semantics, syntax or both semantic and syntax of conjuncts involved.

[2] `http://nkjp.pl/poliqarp/`

[3] We talk about "lack of specified semantic gender" when we come across sentences such as (i), where there is no semantic gender of *dziecko* 'child' provided by the context and if the speaker did not know whether the child was a boy or a girl. Please note that Corbett's rules cannot account the M1 verb form used in (i).

i. matka i dziecko przysz-li do lekarza
mother.F and child.N came-M1.PL to doctor
'The mother and child came to see the doctor.'

Object licensing in Fijian and the role of adjacency

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1. An unusual DOM pattern in Fijian. Many researchers working on Fijian have noted that it has an unusual differential object marking (DOM) pattern (e.g. Dixon 1988; Alderete 1998; Aranovich 2013). Pronoun and proper name objects must remain in a VP-internal position, adjacent to the verb, without the determiner *ko* that otherwise appears with pronouns/proper names (1a). In contrast, common nouns appear with a determiner *na* and do not have to remain in the VP (1b).

(1) a. e a [$_{VP}$ kau-ti **(*ko)** **au** mai] ko Eroni.
3SG PST bring-TR.PR **DET.PR 1SG** DIR DET.PR Eroni
'Eroni brought me.'

b. e a [$_{VP}$ kau-ta ___ mai] **na** **ilokoloko** ko Eroni.
3SG PST bring-TR.N DIR **DET.N** **pillow** DET.PR Eroni
'Eroni brought the pillow(s).'

The difference between the objects is also reflected in the transitive suffix on the verb (underlined), which is *-Ci* with pronouns and proper names, and *-Ca* with other objects. This DOM pattern is surprising because it seems to go against common DOM tendencies. DOM patterns always obey an animacy or definiteness hierarchy (e.g. Aissen 2003), such that objects higher on the scale are morphologically marked and tend to appear in higher positions. In Romanian, for instance, pronouns/proper names must take the DOM marker *pe* (Klein 2007). In Fijian, however, objects higher on the scale must be in a *lower* position and show relatively reduced marking.

This talk argues that this unusual effect holds because pronoun/proper name objects are licensed by morphological merger with the verb at PF (Levin 2015; Branan 2016). We provide novel evidence for the notion of licensing through adjacency by showing that the DOM pattern is sensitive only to surface adjacency, and can affect even nominals on the edge of an embedded CP. In this way, the Fijian facts also provide support for the idea that nominals require licensing (Vergnaud 1981), and for an approach to DOM that ties its distribution to licensing (Kalin 2016).

3. Pronoun/proper name objects are low. As Alderete (1998) and Aranovich (2013) note, the Fijian VP can be diagnosed by a set of postverbal particles which encode meanings associated with low adverbial material. These must precede the subject and scope right-to-left (2).

(2) e dau lagusere **vinaka tuga**.
3SG HAB sing **well** **always**
'S/he always sings well.'

As in Aranovich (2013), we assume these particles right-adjoin to the VP. Pronoun and proper name objects must precede postverbal particles (*mai* in (3a–b)), and so reside within the VP:

(3) a. e a [$_{VP}$ kau-ti **au** mai] ko Eroni.
3SG PST bring-TR **1SG** DIR DET.PR Eroni
'Eroni brought me.'

b. *e a [$_{VP}$ kau-ti/ta ___ mai] **au** ko Eroni.
3SG PST bring-TR DIR **1SG** DET.PR Eroni
'Eroni brought me.'

In contrast, other objects may appear after postverbal particles (1b), and thus higher in the clause.

4. A partial polysynthesis analysis. Alderete (1998) and Aranovich (2013) have argued that this DOM pattern arises because Fijian is a partial pronominal argument language (*cf.* Jelinek 1984). In this view, pronouns and proper names are true objects, in the complement position of V (4), but common nouns are adjoined phrases, co-indexed with an incorporated pronoun (5).

(4) $[_{VP}$ V Pronoun/proper name] . . . (5) $[_{VP}$ V+*pro*$_i$] . . . Common noun$_i$ . . .

This analysis capitalizes on the morphological difference in the transitive suffix, and posits that the incorporated pronoun is realized as the transitive *-Ca* suffix that appears with common nouns.

This approach explains why pronouns/proper names appear to require adjacency: this simply reflects their base-generated position. One of Aranovich's arguments for this view is that the *wh*-pronoun *cei* ('who') appears with the *-Ca* suffix instead of the usual *-Ci* suffix when fronted:

(6) au kila-a $[_{CP}$ **ko cei** o iko na sure-ta ___]
1SG know-TR.N **DET.PR who** DET.PR 2SG FUT invite-TR.N
'I know who you will invite.'

If the *-Ca* suffix is an incorporated pronoun, constructions like (6) can be analyzed as resumption.

5. Adjacency across CP boundaries. An objection to (6) is that Potsdam (2009) presents evidence that what looks like *wh*-movement in (6) involves clefting. More importantly, when a pronoun/proper name is at the edge of an embedded CP and string-adjacent to a higher verb, it can be treated as an object of that verb: the *-Ci* transitive suffix appears and the determiner *ko* is lost:

(7) au kila-a $[_{CP}$ ***(ko) cei** e a rai-ca na cava]
1SG know-TR.N **DET.PR who** 3SG PST see-TR.N DET.N what
'I know who saw what.'

This ECM-like pattern does not involve movement, but appears with surface adjacency. A higher adverb (8), a postverbal particle, or just an overt subject in the higher clause disrupts the effect.

(8) *au a qai kila-i nanoa $[_{CP}$ **cei** e talei-taka ko Eroni]
1SG PST GAI know-TR.N yesterday **who** 3SG like-TR.N DET.PR Eroni
'I found out yesterday who Eroni likes.'

The pronoun in the embedded CP can even be inside a disjoint structure. Omission of *ko* is possible only if the pronoun is the first disjunct, and so surface-adjacent to the higher verb:

(9) au kila-i $[_{CP}$ $[_{OrP}$ **cei** se na cava] iko a rai-ca]
1SG know-TR.PR **who** or DET.N what 2SG PAST see-TR.N
'I know who or what you saw.'

The object marking pattern with pronouns and proper names then cannot be due to base-generation, since the adjacency effect surfaces even in *derived* environments.

6. Licensing through morphological merger. These facts provide novel evidence that adjacency plays a role in nominal licensing. We propose that pronoun/proper name objects are licensed through morphological merger with the verb at PF (Levin 2015; Branan 2016), because Fijian *v* lacks the ability to assign accusative case. Licensing can occur only by having the determiner *ko* merge with the verb at PF. As in Levin's (2015) account of pseudo-noun incorporation, this exempts the DP from the Case Filter, because it is now part of the verb's extended projection.

Why are common noun objects not subject to this licensing requirement? We posit that such objects are smaller and lack a D layer (together with its associated [uCase] feature). Independent evidence that Fijian common nouns appear with less structure comes from the fact that they are number-neutral (1b). In contrast, Fijian pronouns show *four* distinct numbers. In addition, Fijian nouns don't combine directly with numerals or with quantifiers (Dixon 1988; Aranovich 2013). As for the *-Ci/Ca* alternation, we note that many other items in Fijian morphologically distinguish the two types of nominals (the determiners *ko*/*na* and most prepositions). We take this to reflect the size of the nominal selected for by a particular functional item. We account for the presence of *-Ca* in clefts like (6) by assuming a null operator classed with common nouns (like *cava* 'what' in (9)).

Reconstruction effects in *wh*-slifting: Experimental evidence

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§1 Introduction. A shared assumption among all major approaches to clausal complement selection (e.g., from Grimshaw 1979 to Ginzburg & Sag 2001) is that propositional-attitude predicates, such as *think*, do not select questions (interrogative clause types) but propositions (declarative clause types). (1a), in which *think* selects a declarative clause, is grammatical, but (1b) is not if the complement of *think* is a *wh*-interrogative clause.

(1) a. I think that Mary met someone.
b. *I think who Mary met.

An ideal construction to test the validity of this assumption is '*wh*-slifting' (after Ross 1973, e.g., Kayne 1998; Haddican et al. 2014; Stepanov & Stateva 2016), exemplified in (2). The grammaticality of (2), where a *wh*-question (CP-2) appears to be associated with the verb *think* (CP-1), sharply contrasts with the illicit (1b). So, the question is if CP-2 originates from the complement position of *think* or is inserted in a position adjoined to CP-1 (where the precise node of adjunction is irrelevant to the purposes of the present discussion).

(2) [$_{CP\text{-}2}$ Who did Mary meet], [$_{CP\text{-}1}$ do you think]?

To shed light on the 'argument/adjunct' status of CP-2, the present study reports the preliminary results of an acceptability judgement task that examines reconstruction effects in English *wh*-slifting, in the context of configurations like (3), and addresses the theoretical implications of these results for standard approaches to clausal complementation.

(3) [$_{CP\text{-}2}$ Which picture of herself$_j$ is on sale], [$_{CP\text{-}1}$ does she$_j$ think]?

Under Principle A of Binding Theory (Chomsky 1986), reflexives like *herself* must be bound by a c-commanding antecedent, such as s*he* (for a recent formalization of c-command, see Collins & Stabler 2016). So, if constructions like (2) are acceptable, CP-2 must originate from a position that typically corresponds to the complement of *think*. However, if (2) is unacceptable, then CP-2 is adjoined to CP-1.

§2 Methodology. The *Wh*-Slifting Task consists of 48 stimuli-sentences in total, equally divided into 24 experimental and 24 control items (illustrated in (4), where the relevant phrasal bracketing and possible reconstruction sites are indicated as well; participants were just given a plain text version). It follows a 2×2 design: (i) the 24 experimental sentences included 12 lexicalizations of a 'whole' and 12 of a 'partial' preposing of *wh*-questions; (ii) the sentences of each condition were in turn divided into two levels of representation, with the *wh*-phrase reconstructing either into the C(omplementiser)- or into the T(ense)-domain. The control items—taken from the stimuli of Keller's (2000) experiment 14: sub-experiment 3 (cf. Gordon & Hendrick 1997)—were also used as fillers, pointing towards the grammatical aspect of the task. All stimuli-sentences were pseudo-randomised to avoid any bias effects.

Two pilot studies were conducted in order to finalize the protocol of the task. In the first pilot study (P1), participants were asked to read carefully one by one the sentences of the task and rate the naturalness of each sentence (on a 7-point Likert scale), based on their individual preferences. In the second pilot study (P2), participants were additionally asked to choose one out of several possible options with respect to the domain of CP-1 (items of the C-domain had 6 options, items of the T-domain 5), in order to indicate the best possible reference of the reflexive pronoun.

(4) a. [[Which picture of himself] will look nice on that wall] *does he believe* __?
b. [Which caricature of yourself] *do you expect* [__ will be most hilarious]?

c. [[Which painting of herself] will they find __ fabulous] *does she think* __?
d. [Which drawing of themselves] *did they say* [__ he will sell __]?
e. Joan respects herself. / *Joan's father respects herself.

§3 Results. The results of P1 revealed evidence suggesting that the sentences of the 'whole-complementiser' condition (4a) were the least (with a mean acceptability rate of 4.5) and sentences of the 'part-tense' condition (4b) the most acceptable (with a mean rate of 6.42). No particular variation could be observed between participants or within the items of each condition. The results of the first task of P2 remained in line with the outcome of P1, so that the least acceptable sentences were of the 'whole-complementiser' condition (5.2) and the most acceptable sentences of the 'part-tense' condition (6.2).

With respect to the second task, the most prevalent option for the sentences of the T-condition, denoting the person the reflexive referred to, was the first following (the reflexive) pronoun. That was also the case for the reflexives in the 'part-complementizer' condition, so that *themselves* in (4d) was assigned to *they*. However, the reflexives in the sentences of the 'whole-complementiser' condition were instead assigned to the second following pronoun, so that *herself* in (4c) was indicated as referring to *she*.

Due to performance variation and inconsistencies among the participants, the protocol of the *wh*-slifting task returned to its initial design, consisting of only one task. We are currently collecting data with this protocol from English (poor morphology but well studied on *wh*-slifting) which will later be extended to German (rich morphology and well studied on related phenomena, e.g. integrated parentheticals, but not *wh*-slifting) and Greek (rich morphology but not studied at all with respect to *wh*-slifting or relevant related phenomena).

§4 Discussion. Against adjunction-oriented treatments of CP-2 (e.g., Haddican et al. 2014; Stepanov & Stateva 2016), the results of the present study clearly support the conclusion that CP-2 originates from the complement position of the verb *think*. The question then is how to account for this conclusion, while maintaining the standard assumption that predicates like *think* do not select for *wh*-interrogative complements, as the ungrammaticality of (1b) indicates. In other words, the question is what the complement position of CP-2 amounts to.

To address this question, we will adopt a recent approach to (English) *wh*-slifting (Vlachos 2016, 2017) which argues that a functional D-layer mediates the association of the propositional-attitude verb with CP-2: the entire DP is the complement of the verb, while D dominates CP-2, and translates to an indefinite element that ranges over the set of (true) propositions discharged by CP-2 (Hamblin 1973; Karttunen 1977), in a way that resembles a subordination strategy of *wh*-scope marking (Dayal 2000).

Crucially, building on the relevant literature, this approach argues that, unlike constructions like (1b), the relevant complementation structure in *wh*-slifting is combined with a corresponding 'de-intensification' (Bresnan 1968) of the original semantics of the propositional-attitude verb: the verb that supports *wh*-slifting must not only be able to select propositions (as in (1)), but is restricted to a rather narrow set of predicates (unlike (1)), which roughly corresponds to the 'weak assertive' class of Hooper (1975). What accounts for this semantic shift is an evidential modal head (MoodEvid) that surfaces between the C(omplementizer) and T(ense) domain of CP-1, and hosts the relevant predicate (and clausal subject), restricting its interpretation (along with that of the subject).

The assumption that an indefinite D-layer and an evidential Mood-head are implicated in the structure of *wh*-slifting raises interesting questions about the role of functional structure in (clausal complement) selection, which the present experimental results push further.

Unselected Embedded *wh*-Questions: Extensions

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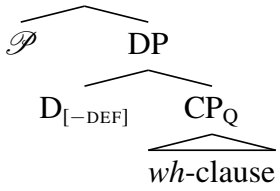
§1 Claim & Import(ance). In this talk, I will claim that a functional D-layer may mediate the association of a propositional-attitude ($\mathscr{P}$) predicate (i.e., a predicate that may combine with a clausal complement only of the declarative type; e.g., *think*) with an interrogative *wh*-clause. The entire DP is the argument of $\mathscr{P}$, while D dominates the *wh*-clause and translates to an indefinite ([−DEF]) element (ranging over a set (or sets) of propositions), as in (1).

(1)



The theoretical import(ance) of this claim is that it completes a so far incomplete picture about clausal complementation: an early conjecture of the theory of Generative Grammar has been that clausal complements are dominated by a nominal shell (Chomsky 1955/1985; Rosenbaum 1967), which, in current terms, corresponds to a D-layer that may translate to either a definite element or a polarity item (Kiparsky and Kiparsky 1971; Adger and Quer 2001; Alrenga 2005; Arsenijević 2009; Kayne 2010; Roussou 2010; Takahashi 2010; Knyazev 2016). While "polarity" is a property belonging to "indefiniteness", the conjecture in question does not extend to *prima facie* indefinite elements, which is a gap that the present claim seeks to fill in.

§2 Facts & Analysis. To support the claim in §1, I will consider two *wh*-constructions, and show that they are variants of the same *wh*-scope marking strategy (Vlachos 2016; forthcoming): a subordination strategy where a [[D CP]] denotation maps transparently to a [D CP] syntax. This extends the range of the available *wh*-scope marking representations in a way predictable by the theory (Dayal 2000).

The two *wh*-constructions under consideration are English *wh*-slifting (cf., (2a)) and German *wh*-Integrated Parentheticals (*wh*-IPs; cf., (2b)). In both cases, an interrogative *wh*-clause appears to be associated with a $\mathscr{P}$-clause (the clause containing a $\mathscr{P}$-predicate; *think*/*glaubst*): either a yes/no-question (in both English and German; cf., (2a,b)), or a *was*-clause (in German; cf., (2b)).

(2) a. *Wh*-SLIFTING
[$_{wh\text{-clasue}}$ Where does he live now] [$_{\mathscr{P}\text{-clause}}$ do you think]?

b. *Was*/VERB-INITIAL INTEGRATED PARENTHETICAL (*wh*-IP)
[$_{wh\text{-clause}}$ Wo wohnt er jetzt] [$_{\mathscr{P}\text{-clause}}$ (was) glaubst du]?
where lives he now what believe you
"Where do you think he lives now?" (Reis 2000: 359, (2), (3))

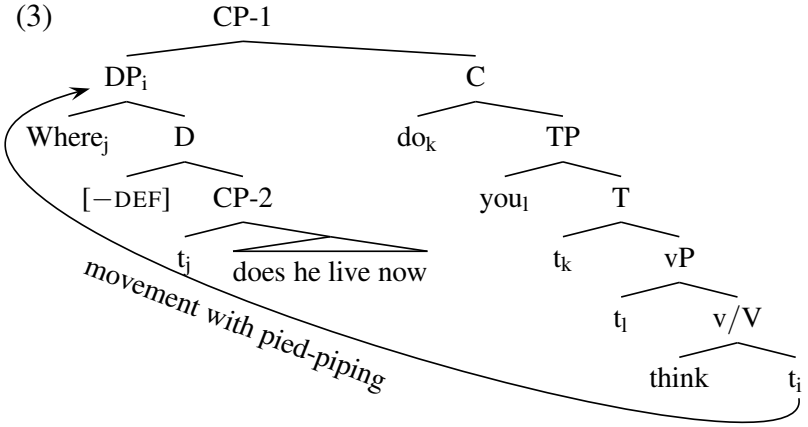
Wh-slifting and *wh*-IPs have the same empirical profile, clearly pointing at a unified treatment (Vlachos 2016): (i) each *wh*-construction may permit only three kinds of re-orderings between the *wh*-clause and the $\mathscr{P}$-clause (INITIAL, SPLIT, FINAL); (ii) the subject-predicate interpretation of the $\mathscr{P}$-clause is heavily restricted (only second-person pronominal subjects; only a certain set of $\mathscr{P}$-predicates); (iii) the melody of the $\mathscr{P}$-clause is reduced and integrated into the corresponding prosody of the *wh*-clause, which acquires the "main" question request; (iv) both the *wh*-clause and the $\mathscr{P}$-clause have main-clause syntax (subjec-auxiliary inversion; SAI).

Although *wh*-slifting and *wh*-IPs have never been compared to each other, an initially promising unified approach is to reduce them to *wh*-scope marking, because both of them are comparable to

typical *wh*-scope marking constructions of the German/Hindi sort (Kayne 1998; Lahiri 2002; Reis 2000, 2002; Stepanov and Stateva 2016), despite argumentation for the opposite direction vis-à-vis *wh*-slifting (Haddican et al. 2014). The question then is what kind of *wh*-scope marking strategy makes the correct empirical predictions.

Based mainly on ordering and biding facts, and drawing from the results of an acceptability judgement study that tests reconstruction effects in English *wh*-slifting (Vlachos et al., in progress), I will argue that a subordination variant of *wh*-scope marking yields both *wh*-constructions: an indefinite DP, which typically hosts a *wh*-scope marker, dominates the *wh*-clause, and is the argument of the $\mathscr{P}$-predicate. This is exemplified here in (3) only for *wh*-slifting (cf., (2a)), due to space limitations.

(3)



(3) says that an indefinite D-layer introduces CP-2 in the complement position of *think*. This D is empty in *wh*-slifting, but is occupied by the *was*-marker in the case of German (2b). The closest, and most suitable, candidate to value D's [−DEF] feature is the *wh*-phrase in [SpecCP-2]. So, *where* agrees with D, and moves to [SpecDP] to satisfy the EPP feature of the latter. From [SpecDP], *where* agrees with C-1, and subsequently moves to [SpecCP-1] due to the latter's EPP, pied-piping CP-2. Despite originating from a subordinate position, CP-2 figures SAI because it is not lexically selected by the $\mathscr{P}$-predicate, but is functionally selected by D (McCloskey 2006). This strategy also accounts for the following two facts (among several others): (i) the optionality of clausal pied-piping, as in (4a) (clausal pied-piping is parasitic on *wh*-movement; Arregi 2003); (ii) the possibility of A-binding, as in (4b) (reconstruction).

(4) a. Where, do you think, does he live now?

b. Which pictures of himself$_i$ are on sale, does he$_i$ think

The analysis in (3) is part of the story and not the whole story, as I will further argue that a Speech Act operator on top of CP-1, and a Mood Evidential head that projects between the C and T domain of CP-1, determines the relevant interpretation and prosody, thus drawing a synchronic link between *wh*-scope marking and parenthetical constructions (Reis 2000, 2002; Rooryck 2001a,b).

§3 Consequences & Implications. The analysis in §2 extends the familiar set of grammars that assume *wh*-scope marking (e.g., German/Hindi) to English. To the extent that a derivation like (3) could generalize, *mutatis mutandis*, to typical "long-distance" *wh*-movement (Chomsky 1977), it would raise far-reaching implications worth considering, some of which pertain to: (i) the "trigger" for the intermediate landing site of long-distance *wh*-movement and "labelling" (Chomsky 2013, 2015); (ii) the property of some verbs being "bridges" to *wh*-extraction (Erteschik-Shir 1977); (iii) the difference between languages that permit *wh*-extraction out of finite clauses (e.g., English) and those that do not (e.g., Russian) (Ross 1967); (iv) the close link between embedded *that*-clauses and *wh*-clauses (Ross n.d.); and (v) the "optionality" of long-distance *wh*-in situ (Vlachos 2012, 2014, 2017).

Microvariation in modals and negative concord in Welsh dialects

David Willis, University of Cambridge

Some northern varieties of Welsh use *cau*, historically a reduced form of a verb found in other varieties as lexical *nacáu* 'refuse', as a negative modal meaning roughly 'won't':

(1) Mae 'r drws (yn) cau agor.
be.PRES.3SG the door (PROG) CAU open.INF
'The door won't open.'

This paper will show that those varieties that use cau as a modal manifest at least four different grammars, the result of a series of innovations from a unified nineteenth-century grammar, where, while the phonological reduction of *nacáu* to *cau* is well attested, it is not used in this negative-modal sense. Data come from written sources (e.g. fiction) and data from fieldwork for the ongoing *Syntactic Atlas of Welsh Dialects* (*SAWD*). I argue that the following grammars/stages need to be recognized:

(i) *cau* ceases to impose the requirement that its subject is volitional/agentive, and therefore goes from being a control verb 'refuse' to being a raising verb (loss of argument structure);

(ii) *cau* enters the negative system proper and begins to trigger negative concord; thus, the affirmative form of 'be', *mae*, in (1), is replaced by the negative-concord form, (*dy*)*di*:

(2) **(Dy)di** 'r drws (yn) cau agor.
NEG.be.PRES.3SG the door (PROG) CAU open.INF
'The door won't open.'

These stages are reflected in ongoing dialect variation, different varieties experiencing change to differing extents: data from the *SAWD* fieldwork show that the pattern in (2) is grammatical for speakers under 50 in a contiguous area of central north Wales and is accepted sporadically by older speakers from this area, while elsewhere only (1) is accepted. Minor patterns, accepted only by a subset of innovating speakers, suggest further stages:

(iii) *cau* is extended to clauses with an n-word, as in (3), where the shift in the polarity of *cau* plausibly triggers a shift from *pawb* 'everyone' to *neb* 'no one':

(3) Oddna **neb** **cau** **dod** efo fi!
was.3SG.there no.one CAU come.INF with me
'No one would come with me!' (attested example)

(iv) *cau* begins to trigger 'strong' negative concord i.e. both negative concord on the verb, as with (*dy*)*di* above, and presence of the sentential negator *ddim* 'not':

(4) (Dy)di 'r car **ddim** **cau** cychwyn.
NEG.be.PRES.3SG the car NEG CAU start.INF
'The car won't start.'

Among the *SAWD* speakers, the innovations are related hierarchically, such that the presence of an innovation implies the presence of all prior innovations in a speaker's grammar (remaining speakers have a fifth grammar, having (*na*)*cáu* as a lexical rather than functional item):

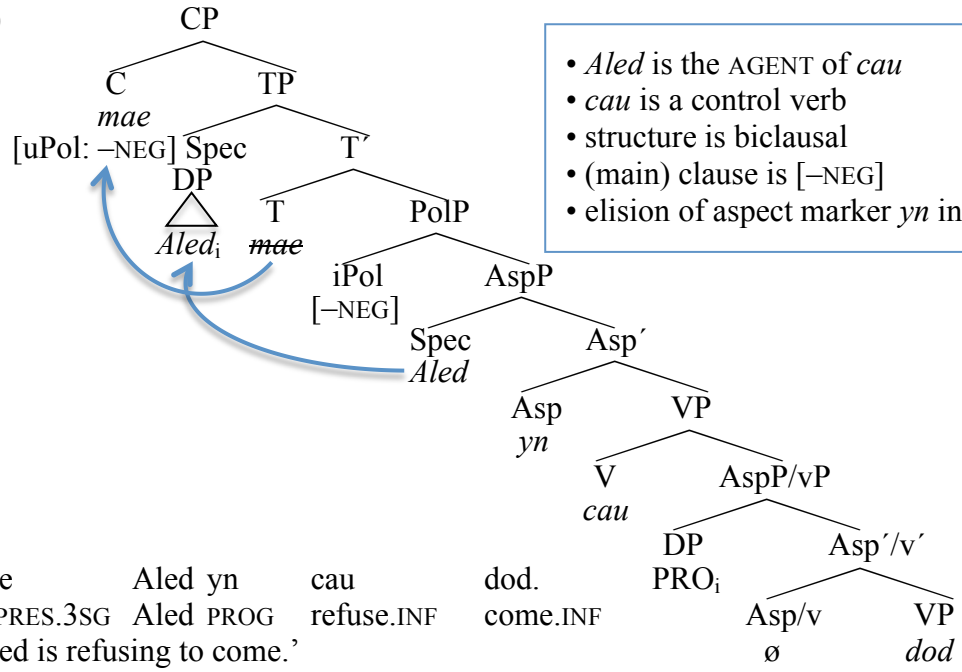
(5) no neg. concord > weak neg. concord > concord with indefinites > strong neg. concord
(33 speakers) (15 speakers) (12 speakers) (1 speaker)

This suggests that the various manifestations of negative concord form a single structured innovation. Formally, *cau* has ceased to impose the requirement that its subject is volitional / agentive, going from being a control verb, as in (6) in 19th-century dialects, to a raising verb (via loss of independent argument structure), as in (7), today. This change, attested in other cases of the grammaticalization of modals (cf. English *will*) (Kuteva 2001), eliminates

structure, implying a Minimize Structure preference in acquisition (cf. van Gelderen 2004).

Furthermore, *cau* enters the negative system. In (6), it is a lexical verb, lacking polarity features. In the innovative analysis in (7), it bears a negative feature [+NEG]. Initially acquirers note that *cau* does not trigger negative concord, even though other [+NEG] items (e.g. the negator *ddim* 'not') do. They adapt their output to match the observed production of others in an ad hoc way. In (7), we expect the unvalued Pol feature on C to be valued [uPol: +NEG] (from *cau*). For a time, speakers override this, maintaining the conservative output in (1) despite reanalysis. Variation arises once this override is eliminated by some speakers, giving rise to the innovative pattern, (2). This approach conceptualizes innovation of negative concord as a form of extension in the wake of a semantically based reanalysis.

(6)

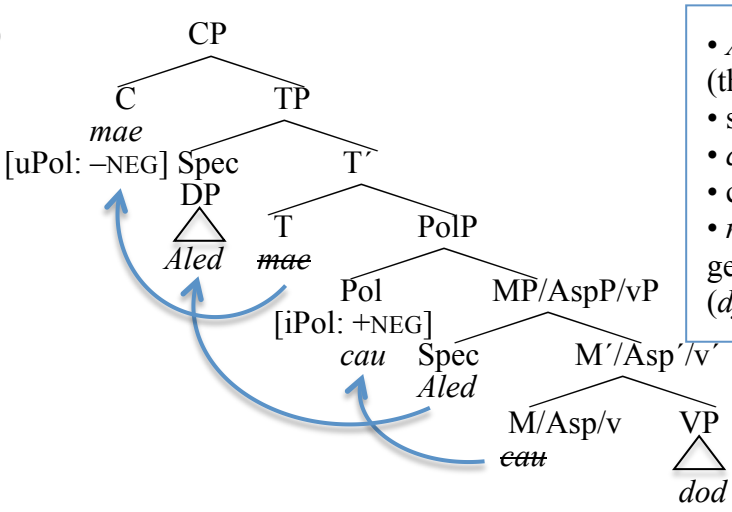


- *Aled* is the AGENT of *cau*
- *cau* is a control verb
- structure is biclausal
- (main) clause is [–NEG]
- elision of aspect marker *yn* in fast speech

Mae	Aled	yn	cau	dod.
be.PRES.3SG	Aled	PROG	refuse.INF	come.INF

'Aled is refusing to come.'

(7)



- *Aled* is an argument of the lexical verb (theme of *dod* 'come' here)
- structure is raising (subject raises)
- *cau* is an auxiliary, realizing Pol+Asp
- clause is [+NEG]
- *mae* is inexplicably [–NEG], hence new generation innovates the [+NEG] form (*dy*)*di*

Co-option of *cau* into the negative system proper is at first sight unexpected, but makes sense if the wider verbal system of the language is considered. *Cau* instantiates negation and mood, thereby amounting to a composite head. Welsh has other such heads paired for polarity, as with *gallu* 'be able' vs. *methu* 'be unable' (negation + mood) or *wedi* 'perfect marker' vs. *heb* 'negative perfect marker' (negation + aspect). The existence of complex heads of this type is likely to have favoured the same treatment for *cau*, suggesting that cross-category generalizations of this kind also need to be encoded lexically in some way.

To 73 and Beyond: The Hidden Connections between Language and Number

Charles Yang (University of Pennsylvania)

Everyone can count on forever but of course no one learns that by literally counting forever: there must be a tipping point at which children figure out the counting system of their native language. Why is this number 73 for English-learning children, and approximately 40, for Chinese-learning children?

This talk reveals a surprising connection between learning to count and learning the rules of human language: that 73 and 40 are in fact predictable from a general theory of inductive learning. This theory provides a new and unified account for a range of perennial puzzles such as the ineffability of "amn't" in most English dialects as well as its presence in others. It also provides a new perspective on the nature of numerical cognition, which I argue is ultimately, and completely, linguistic.

Perception of Interrogative and Declarative Tunes in Tianjin Mandarin

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Introduction: Alternating pitch accents and boundary tones are common methods of making an interrogative tune in non-tonal languages (e.g. English, Bengali, etc.); however, in Tianjin Mandarin, a tonal dialect of northern Chinese, making a syntactically unmarked yes-no question (YNQ) is much restricted by the pitch contours and registers of lexical tones, since both lexical tones and intonational tunes are intrinsically linked with pitch modulation. Zhang (2016) discovered that the differences between syntactically unmarked YNQ and statement in Tianjin Mandarin are **register** change and an extra **floating H% boundary tone** for intonational YNQ: YNQ is always higher in register than statements; a floating H% boundary tone is added at the right boundary in YNQ, which facilitates the rise in rising tones and deters the falling in falling tones. The differences do not evidently display in surface phonetic pitch contour. With the restriction from lexical tones, can native listeners still perceive the YNQ tune well? The current study investigates i) whether listeners could distinguish YNQ from statements by merely using the subtle cues of register change and the H% floating boundary tone; and ii) how the cues are processed during perception.

Literature review: In some other contour tonal languages, such as standard Mandarin and Cantonese, changes of intonational tunes are also restricted by lexical tones. Potential conflicts in the perception of lexical tone and intonational tune thus also exist. However, the perception and identification of different intonational tunes are extremely understudied. In a study on standard Mandarin (Yuan & Shih, 2004; Yuan, 2011), it was found that the intonational questions of sentences that end with Tone 4 (HL Tone) were the easiest to be identified correctly, while those with Tone 2 (Rising Tone) were the most difficult. They used a corpus of 1040 sentences that were recorded by 8 speakers. The corpus varied in terms of the lexical tones of the last syllables, the tunes (question tune or statement tune), and the focus location (initial, medial, final). Ma et al. (2011) investigated the perception of statements and intonational yes-no questions in Cantonese. They also varied the last syllable of a sentence. The results showed that Tone 33 (Mid-level Tone) had the highest accuracy while Tone 55 and 25 had the lowest accuracy (note: other tones in Cantonese were 21, 23, 22). The results were partially in accordance with Yuan (2011) in that the tones ending with H were the most difficult to distinguish in Cantonese as well. The current study made improvements upon the existing studies. Firstly, instead of using sentence stimuli, the current study made use of monosyllabic stimuli, which had better-controlled tune and tone. Secondly, Tianjin Mandarin has a more evenly distributed lexical tone inventory (Figure 1), which conveniently serves as a good tool for prosody research; while the Mandarin data has a risk of favouring high and/or rising tones (Mandarin tones: HH, LH, HLH, HL).

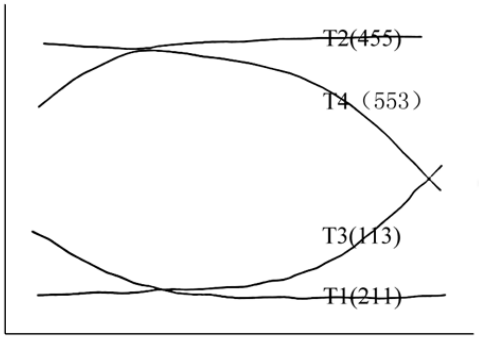


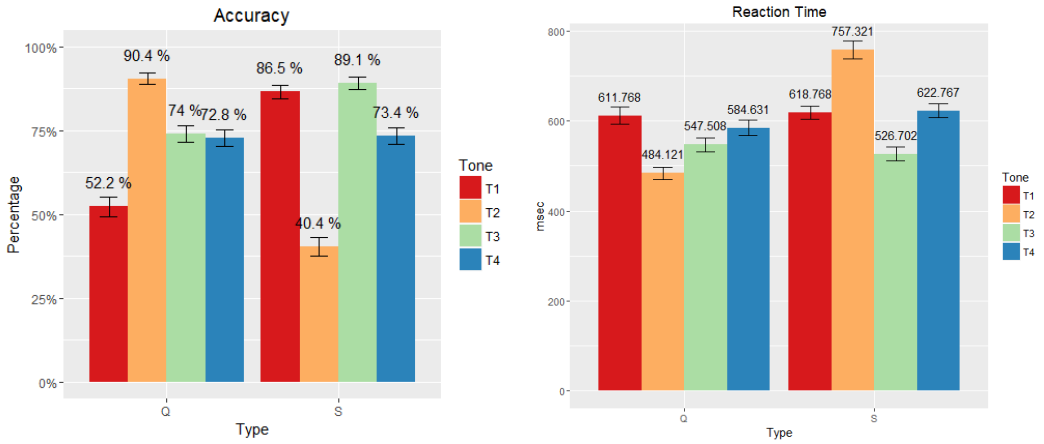
Figure 1: Tianjin Mandarin lexical tones with tone numbers in brackets.
T1: L (211); T2: H (455);
T3: LH (113); T4: HL (553)

Methods: 28 native Tianjin Mandarin speakers (15 male and 13 female) took part in the experiment. They were instructed to perform a forced-choice identification task by pressing

either the ‘Q’ button or ‘S’ button on the handsets as quickly as possible when hearing an utterance. Accuracy and reaction time were recorded. The stimuli were monosyllabic words pronounced in isolation, spoken by one female speaker and one male speaker. A log-linear analysis was done to determine the relevant factors for Accuracy. A mixed-effect model was used to examine the statistical significance of the reaction time data. Post hoc Tukey tests were also used to scrutinise pairwise comparisons.

Results and discussion: The following table shows the accuracy rate of the identification task. The lexical tones are presented by average accuracy rate. When results from two lexical tones are not statistically significant, the relation is represented with a “≈”.

Sentence type	Accuracy
Statement	T3(LH) ≈ T1(L) > T4(HL) > T2(H)
Yes-No Question	T2(H) > T3(LH) ≈ T4(HL) > T1(L)



The crucial cue for **perceiving statements** is the initial L tone at the left boundary. Lexical Tone 1 and Lexical Tone 3 (L tone and LH tone) both start with a L, so they both achieve the highest accuracy. When the initial tone does not help with identification, such as in Lexical Tone 4 and Lexical Tone 2 (HL and H tone), the ending H tone interferes with the identification. Lexical Tone 2 (H) ends with a H tone that interferes with the identification, therefore the accuracy is extremely low. As for Lexical Tone 4 (HL), although it does not have a facilitating L initial tone, it does not have an interfering H tone at the end either. T4(HL) therefore is easier to identify than T2(H).

Conversely, during the **perception of YNQ**, the pitch height of the right boundary is the first determining factor. Then, contrary to that of the statements, the initial L interferes with the identification. Lexical Tone 2 (H) ends with a H tone and does not have any interfering L tone. It, therefore, achieves the highest accuracy. T1, a L tone which starts with a L and ends with a L, has the lowest on the contrary. T3 is higher than T4 but not significantly, which indicates the effect of both missing the facilitative ending H and having the interfering initial L both burdens the identification.

The reaction time results are in accordance with the accuracy results: the more accurate, the faster the responses.

Conclusions: The results show that it is not easy to identify tune types in a tonal language, especially when the segmental information is limited. During the process of perceiving tunes, our brain processes the pitch height of both ends of an utterance but subconsciously uses strategies with different directionalities. The low accuracy of this task also provides a potential reason for the existence of syntactically marked yes-no questions, which is more frequently used to ask a question without prior context.

Instrument, cognate objects and plurality of events

Ziren Zhou (University College London)

Instrument verbal classifiers. It is well known that there is a set of morphemes that obligatorily participate in expressing the plurality of events in English (1), French (2), German (3) and Mandarin (4):

(1) Spock hit Kirk two *(times)

(2) Spock a frappé Kirk deux *(fois)
Spock AUX hit Kirk two (times)

(3) Spock hat Kirk zwei *(mal) getroffen
Spock AUX Kirk two (time) hit

(4) Spock dǎ le Kirk liǎng *(cì)
Spock hit ASP Kirk two (time)

Unlike English, French and German, Mandarin has an inventory of variants equivalent to the English word *time/fois/mal/cì*. They are called verbal classifiers. Since they also have added information about the instrument used to perform the event, I call this particular group of classifiers *Instrument Verbal Classifiers* (VCL_{instr}).

(5) Spock dǎ le Kirk wǔ bāzhǎng/quán
Spock hit ASP Kirk five palm/fist
'Spock hit Kirk ×5 with palm/fist'
⇏ There are five palms/fists.

(6) Spock kàn le Kirk wǔ yǎn
Spock look ASP Kirk five eye
'Spock looked at Kirk ×5 with his eyes'
⇏ There are five eyes.

(7) Spock tǒng le Kirk wǔ dāo
Spock stab ASP Kirk 5 knife
'Spock stabbed Kirk ×5 with knife.'
⇏ There are five knives.

(8) Spock zhā le Kirk wǔ zhēn
Spock puncture ASP Kirk 5 needle
'Spock punctured Kirk ×5 with needle.'
⇏ There are five needles.

Two questions immediately arise from (5-8): First, why do these types of morphemes all encode the instrument of an event? Second, why wouldn't the entailments go through, whereas in the gloss it seems that the numeral is modifying the Instrument?

The claims of this paper are twofold. First, the constituent [Num VCL_{instr}] in (5-8) is the cognate object (CO) of the verb, as it patterns with CO in numerous ways. This direct connection between COs and [Num VCL_{instr}] has not been formally motivated in the literature. By reaching such a conclusion, this paper stands in opposition to previous literature, where VCL_{instr}'s are either isolatedly treated as CO of the verb (Chao 1968; Zhou 1998) or [Num VCL_{instr}] modifies the null CO of the verb (Deng 2013).

The second claim is that [Num VCL_{instr}] constituents are predicates of the event argument of the verb, of type <e, t>. This result differs from previous analyses (eg Deng 2013; Donazzan 2012) where [Num VCL_{instr}] would be treated as quantifiers of type <et, <et, t>>. This paper provides a fragment of semantic composition to show that an <e, t> analysis works equally well.

[Num VCL_{instr}] is a CO of the verb. I maintain this claim by the following four arguments:

I. (True) CO and [Num VCL_{instr}] cannot undergo passivization:

(9) a. Bill sighed a weary sigh. b. *A weary sigh was sighed by Bill. (Jones 1988)

(10) *wǔ bāzhǎng/quán beì Spock dǎ zaì le Kirk shēn shàng
five palm/fist PASS Spock hit at ASP Kirk body on
Intended: 'Five hits with palm/fist were hit by Spock on Kirk.'

II. Both English CO (11) and Mandarin [Num VCL_{instr}] (12) can be the complement of a *give*-type or *take*-type light verb construction:

(11) a. The dog sighed a weary sigh
⇒ The dog gave a weary sigh.

b. The dog walked a casual walk.
⇒ The dog took a casual walk.

(12) a. Spock geǐ le Kirk wǔ quán
Spock give ASP Kirk five fist
'Spock gave Kirk five fist blows.'

b. Spock aí le Kirk wǔ quán
Spock take ASP Kirk five fist
'Spock took five fist blows from Kirk.'

III. [Num VCL_{instr}] (13) parallels with CO (eg in Modern Hebrew, 14) because [Num VCL_{instr}] can only take narrow scope:

(13) yí gè nánrén tī le mén liù jiǎo Mandarin Chinese
one NCL man kicked ASP door six VCL_{instr}(foot)

Narrow scope reading: there is a man such that he kicked the door six times.
Wide scope reading: *Not Available*.

(14) ha-rofe biker xole yapani 6 bikurim Modern Hebrew (Mittwoch 1998)
the-doctor visited patient Japanese 6 visits

Narrow scope reading: there is a patient such that the doctor visited him/her six times.
Wide scope reading: *Not Available*.

IV. Neither CO (15) nor [Num VCL_{instr}] (16) can be referred back to by a pronoun:

(15) The dog lived an eventful life. *The cat lived it too.

(16) Spock qīn le Kirk wǔ zuǐ. *Annie yě qīn le Kirk tāmen.
Spock kiss ASP Kirk five mouth. Annie too kiss ASP Kirk them.

Semantics: Compositional implementation. For a sentence such as (17) below, I propose a lexical entry for a VCL_{instr} like quán/VCL_{instr}(fist) (21) and adopt independently motivated semantics for proper names (18), verbs (19) and numerals (20) to derive the truth conditions of (17). Note that *Predicate Modification* (Heim and Kratzer 1998) is needed when the verb combines with [wǔ/five quán/VCL_{instr}(fist)].

(17) Spock dǎ le Kirk wǔ quán.
Spock hit ASP Kirk five VCL_{instr}(fist)

(18) ⟦Spock⟧ = Spock = e, ⟦Kirk⟧ = Kirk = e

(19) ⟦dǎ/hit⟧ = algebraic closure of set of individuals that are kicking events
$= \lambda e[*\text{hit}(e)] = \langle e,t\rangle$ (by Lexical Cumulativity (eg Kratzer (2007))

(20) $[\![\text{wǔ/five}]\!] = \lambda P_{et}.\lambda x_e.\exists S_{et}[\pi(S)(x) \wedge |S|=5 \wedge \forall s \in S\ P(s)]$
$= \langle\langle e, t\rangle, \langle e, t\rangle\rangle$ (cf. Ionin & Matushansky 2006)

(21) ⟦ quán/VCL_{instr}(fist)⟧ = λx_e.x is an event that uses the fist as its instrument
$= \langle e, t\rangle$ (cf. I.-IV.)

Selected References: Deng, D.2013.The syntax and semantics of event quantifiers in Mandarin Chinese. Ph.D., U. of Wisconsin-Madison. **Jones**, J. 1988. Cognate Objects and Case Theory. *JL* 28. **Zhou**,H. 1998. Cognate objects in Chinese. *Toronto WPL* 17.