ABSTRACTS OF TALKS
The issue of how PIs are licensed in questions remains outstanding. The discovery that Downward Entailingness (DE) as a crucial factor in PI licensing (in the seminal work by Fauconnier and Ladusaw), has made this issue, if anything, all the more vivid. For on the most plausible extensions of the notion of entailment to questions, the latter do not appear to be DE. In particular, much recent work on PIs analyzes them as scalar items, licensed by a silent operator (akin to only or even), as on modern approaches to focus. This line of inquiry arguably explains why DE plays such an important role in the distribution of PIs. These accounts would extend to questions, only if latter could possibly be viewed as DE. Which they do not.

Recently, Guerzoni and Sharvit have added a further tantalizing piece to this puzzle. They point out that while PIs in direct questions are always acceptable, matters are more complicated in indirect questions. In particular, PIs in constituent embedded questions are acceptable with wonder type verbs, unacceptable with surprise type verbs and have an intermediate status with know type verbs, as the following paradigm illustrates:

(1)  a. Claire wonders which students have any book on polarity
    b. ?? Claire knows which students have any book on polarity
    c. * it surprised Claire which students had any book on polarity

(The behavior of the surprise class is particularly unexpected, since when taking that-clause complements, such class does license PIs). G&S further point out that these three types of question embedding verbs fall into semantically natural classes. In terms of standard assumptions on the semantics of questions, wonder only admits ‘strong’ interpretations, know admits both strong and weak interpretations and surprise only weak ones. Thus, G&S conclude, strength matters. And even if a semantics for questions could be devised on which questions came out DE, that would simply not be enough. It would not slice the pie in the right way since it would not be able to explain the pattern in (1).

Summing up, the situation is the following. We have a solid generalization on the distribution of PIs in non interrogative contexts (DE). We also now have an arguably good, precise explanation as to why this is so, relying on scalar operators and the idea that PIs are weak elements of a scale. However, not only such an account does not extend to questions. We also find that the distribution of PIs in questions seems to follow a different (and rather striking) regularity, that links such distribution to an independently needed semantic notion (interpretive strength, as developed in the work of, e.g., Groenendijk and Stokhof).

My goal to address these issues in light of the recent scalar approaches to polarity mentioned above. I believe that a solution may be in sight.
New methods for studying UG in phonology

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Abstract of invited talk for NELS, Ottawa, October 2007

The initial phases of research in generative grammar, in the 1950’s and 1960’s, set the research agenda is still very important in linguistics today: the attempt to isolate properties of language that are the consequence of Universal Grammar. Establishing such principles on a firm basis has proven very difficult, but encouragingly, new methods are emerging for the study of UG, particularly in phonology. Computational work seeks to reverse-engineer the language faculty, constructing systems that assume some version of UG and try to use it in learning the grammar on exposure to representative data. Experimental work enables controlled comparisons of how learning might be influenced by claimed UG factors. The two methods can also be combined, as when the computational model is made to act as “subject” in an experiment also carried out with people.

These methods can be used to study two important effects. Poverty of the stimulus effects occur when learners, exposed to data, come to conclusions richer than what is evident in what is presented to them. For phonology, such effects have been found in artificial language studies (Pater and Tessier 2003, Wilson 2006, Moreton (forthcoming)) as well as studies of concocted zero-frequency forms in the subjects’ own language (Berent et al. 2006, Kawahara 2006, Albright (forthcoming), Zuraw (in press)). Overabundance of the stimulus effects (Nevins et al. 2007, Moreton) occur where data patterns are evident to the analyst (who can look for them with databases, software, etc.), but experimental testing shows that native speakers do not grasp them—inviting the inference that UG does not equip people to find them. I describe some overabundant patterns found in my own studies with Albright, Wilson, and Zuraw, and discuss what theories might predict nonlearning for them.

Computational/experimental research brings evidence to bear on many different questions of UG. At very fundamental level, it offers support for formal rules and constraints over alternatives based on analogy (Albright and Hayes 2003, Albright (forthcoming)). It supports UG proposals in the area of phonological representation, such as metrical grids and autosegmental tiers, as these concepts make phonological learning possible where it would not otherwise be (Hayes and Wilson, in press). And it supports proposals to ground UG in substantive considerations, as in Wilson’s (2006) finding that Steriade’s principle of the P-map predicts how subjects generalize alteration patterns in an experimental context.
Japanese interrogatives are formed by adding a particle no or ka at sentence final position, as in (1a) (no-YNQ and ka-YNQ, respectively). Positive no- and ka-YNQs are generally both epistemically unbiased information-seeking questions, and thus can be answered either affirmatively or negatively, as in (1b). However, in negative contexts, the two types of YNQs differ in two respects: in terms of polarity-(mis)matching and in terms of epistemic (un)bias. The negative no-YNQ in (2a) is epistemically unbiased, and both positive and negative answers are possible, as in (2b). Interestingly, hai ‘yes’ and iie ‘no’ in (2b) are followed by a proposition of opposite polarity (Martin 1962, Kuno 1973, a.o.). This is different from how negative questions are answered in English: did you not go to the school? is answered by yes, I did or no, I didn’t. In contrast, this mismatch in polarity doesn’t occur with the negative ka-YNQ in (3a), i.e., the ka-YNQ is answered in the way English negative questions are answered. However, what is peculiar here is that (3a) is positively biased: (3a) is naturally uttered in a situation where the questioner is expecting a positive answer. A simple negative response is infelicitous, as in (3b), and, if the hearer were to answer it negatively, some further explanation is required, as in (3c). This paper examines the source of the two differences between no- and ka-YNQs.

First, I argue that the difference between the two types of YNQs regarding polarity-(mis)matching is due to their syntactic difference: underlyingly, the no-YNQ in (2a) has a bi-clausal structure in (4a), while the ka-YNQ in (3a) has a mono-clausal structure in (4b). In (4a), no in no-YNQs is considered as a nominalizer that normalizes the preceding sentence, and the normalized sentence \(_{S2}\) is embedded under a copula desu that is followed by the question particle ka. In colloquial speech, copula+ka may be omitted, yielding no-YNQs in (1a) and (2a). In contrast, (4b) does not involve any syntactic complexity. The proposed analysis is based on Kuno’s (1980) finding that the scope of the question particle ka extends only to the preceding verb. According to Kuno, (5a) is infelicitous as a question inquiring whether Taro’s hitting Hanako is the cause of her crying. This is because ka takes naite-iru ‘is crying’ in its scope, but not the because-clause, yielding the question ‘is Hanako crying?’.

Regarding (5b), Kuno points out that the Japanese copula always have a tight connection with the preceding nominal element (e.g., in gakusei-desu ‘student-COP’, nothing can intervene between gakusei and desu). Thus, ka in (5b) takes the copula and the preceding nominalized constituent in its scope. Since the because-clause is in the scope of ka, the intended interpretation obtains. I argue that the polarity-mismatch in no-YNQs is due to their bi-clausal structure. Assuming the underlying structure in (4a), (2a) roughly asks whether it is the case that the addressee didn’t go to the school yesterday. Then the positive hai ‘yes’ response amounts to saying that it is indeed the case that he didn’t go to the school yesterday, and thus hai is tagged with the negative proposition. Similarly, the negative iie ‘no’ answer amounts to saying that it isn’t the case that he didn’t go to the school, hence iie is tagged with the positive proposition (i.e., negation of the original negative proposition).

Building on the syntactic argument of no- and ka-YNQs provided above, I argue that negative ka-YNQs involve the conversational epistemic operator called VERUM, whereas no-YNQs do not involve such an operator. Romero&Han (2001, 2004) observe that the negative YNQ (6a), but not (6b), yields questioner’s positive epistemic bias, and argue that VERUM operator in (7) is introduced by the preposed negation. It is generally assumed that the denotation for the YNQ of a proposition \(p\) is a balanced partition of its positive and negative answers \(\{p, \neg p\}\) (Hamblin 1973). This kind of YNQs is posed when the questioner simply asks addressee’s opinion about \(p\). The job of VERUM operator is to create an unbalanced partition of possible epistemic alternatives regarding “addressee’s certainty to add \(p\) to the Common Ground (CG)”, as shown in (8). As such, the question with VERUM can be posed only when there is a legitimate reason for the questioner to doubt addressee’s conversational move to add \(p\) to the CG. Here, questioner’s belief about the proposition \(p\) is either negatively or positively biased and it conflicts with addressee’s belief. Having this mechanism in mind, let us consider the LF of the negative ka-YNQs in (4b), given in (9). Recall that the ka-YNQs has a mono-clausal structure. Here, according to Kuno (1980), the scope of ka only extends to the preceding negation together with the verb, so the negation is obligatorily the focus of the question particle. In other words, the focused negation in (9) has an analogous effect to the preposed negation in (6a), i.e., VERUM is introduced into the sentence. As in the denotation of the entire YNQs in (9), this sentence is uttered to doubt addressee’s conversational move to add that he didn’t go to the school yesterday to the CG, i.e., the questioner believes that the addressee went to the school yesterday. On the contrary, the no-YNQs in (4a), whose LF is given in (10), doesn’t necessarily involve VERUM operator. Therefore, the denotation of this YNQ is the balanced partition of positive and negative answers. Recall that the scope of question particle in no-YNQ extends to the entire normalized clause (CP2 in the relevant case). In this case, however, the focus of the question is not on negation obligatorily; elements other than negation can be the focus. In other words, the negation in no-YNQs is analogous to non-preposed negation in English negative YNQs in (6b). Evidently, when we make the negation phonologically prominent (i.e., focused), even the English YNQs with non-preposed negation in (11a) and
the Japanese no-YNQs (11b) can yield positive epistemic implicature.

1. a. Kimi-wa kinoo gakkoo-e it-ta {no/ka}?
you-TOP yesterday school-to go-PAST{NO/KA} ‘Did you go to the school yesterday?’

b. Hai, ikimashi.ta. / lie, ikimasesu deshi.ta.
yes, go (POLITE)-PAST / no, go(POLITE)-NEG did-PAST ‘Yes, I did.’/’No, I didn’t.’

2. a. Kimi-wa kinoo gakkoo-e ika-nakat-ta no?
you-TOP yesterday school-to go-NEG-PAST NO ‘Did you not go to the school yesterday?’

yes go(POLITE)-NEG did-PAST / no go (POLITE)-PAST ‘(lit.) Yes, I didn’t.’/(lit.) No, I didn’t.’

3. a. Kimi-wa kinoo gakkoo-e ika-nakat-ta ka?
you-TOP yesterday school-to go-NEG-PAST KA ‘Didn’t you go to the school yesterday?’

yes go (POLITE)-PAST / No go(POLITE)-NEG did-PAST ‘Yes, I did.’/#’No, I didn’t.’

no go(POLITE)-NEG did-PAST relative-GEN house-to go(POLITE)-PAST because.
‘No, I didn’t.’ (It is) because I went to my relative’s house (yesterday).’

4. a. [s1 [s2 Kimi-wa kinoo gakkoo-e ika-nakat-ta no] desu ka]
you-TOP yesterday school-to go-NEG-PAST NOMINALIZER COP Q

b. [s1 Kimi-wa kinoo gakkoo-e ika-nakat-ta ka]

5. a. *Hanako-wa Taroo-ga but-ta kara naite-iru ka?
Hanako-TOP Taroo-NOM hit-PAST because cry-is Q (Kuno 1980: 6d)

b. Hanako-wa [Taroo-ga but-ta kara naite-iru no] desu ka?
‘Is Hanako crying because Taro hit her?’

6. a. Doesn’t John drink?
Positive epistemic implicature: The speaker believes or at least expects that John drinks.
b. Does John not drink?
No positive epistemic implicature necessary. (Romero&Han 2004: 1)

7. \[
\begin{align*}
[VERUM]_{[k]}^s &= \lambda p_{x,w} \wedge \forall w' \in \operatorname{Epi}(w) \forall [w' \in \operatorname{Conv}_x(w') \[ p \in CG_{w'} ] = \operatorname{FOR-SURE}-CG_x \\
\operatorname{Epi}_x(w) &= \text{the set of epistemic alternatives of } x \text{ at } w \\
\operatorname{Conv}_x(w') &= \text{the set of worlds where all the conversational goals of } x \text{ in } w' \text{ are fulfilled}
\end{align*}
\]

8. \[
\begin{align*}
\{\operatorname{VERUM} p, \neg\operatorname{VERUM} p\} &= \{\operatorname{FOR-SURE}-CG_x p, \neg\operatorname{FOR-SURE}-CG_x p\} \\
&= \{\operatorname{FOR-SURE}-CG_x p, \neg\operatorname{FOR-SURE}-CG_x p, \neg\operatorname{FOR-SURE}-CG_x \ldots p \} \\
\end{align*}
\]

9. \[
\begin{align*}
\operatorname{LF}: [\text{CP} [\text{IP} \text{Kimi-wa kinoo gakkoo-e ika-nakat-ta ka}] &= (4b)) \\
&= \{\text{CP} Q_{[\text{ka}]}, \text{VERUM} [\text{not} [\text{IP} you \text{ went to the school yesterday }]] \\
&\text{[[Q]} / [[\text{ka}]]] = \lambda p_{x,w}, \neg \lambda q_{x,w}, q [q = p \vee q = \neg p] \\
&\text{[[CP]}(w_0) = \lambda q [q = \neg \operatorname{FOR-SURE}-CG (\lambda w, \neg q) (you \text{ went to the school yesterday}) v q = \neg \operatorname{FOR-SURE}-CG (\lambda w, \neg q) (you \text{ went to the school yesterday})]
\end{align*}
\]

10. \[
\begin{align*}
\operatorname{LF}: [\text{CP1} [\text{IP1} \text{Kimi-wa kinoo gakkoo-e ika-nakat-ta no}] \text{ desu] ka}] &= (4b) \\
&= \{\text{CP} Q_{[\text{ka}]}, \text{it is} [\text{that not} [\text{IP} you \text{ went to the school yesterday }]]] \\
&\text{[[Q]} / [[\text{ka}]]] = \lambda p_{x,w}, \neg \lambda q_{x,w}, q [q = p \vee q = \neg p] \\
&\text{[[CP1]}(w_0) = \lambda q [q = \neg \operatorname{FOR-SURE}-CG (\lambda w, \neg q) (you \text{ went to the school yesterday}) v q = \neg \operatorname{FOR-SURE}-CG (\lambda w, \neg q) (you \text{ went to the school yesterday})]
\end{align*}
\]

Phasehood, Case and Noun Incorporation
Gabriela Alboiu (York University) and Michael Barrie (UBC)

Issue: We propose that phases (Chomsky, 2001 et seq.) and Case are tightly integrated in a one-to-one relationship whereby each phase domain is capable of licensing one and only one Case marked DP. Also, we examine how noun incorporation (NI) interacts with Case and phases in light of instances of obligatory NI in languages where NI is otherwise optional and typically discourse related. We show that NI is forced exactly when phasehood is voided, thereby removing the Case assigning ability of the phase.

Background: While it is generally true that overt nominals must be licensed by the Case Filter (Chomsky, 1981, attributed to Vergnaud), many languages allow NI as a syntactic licensing mechanism for nominal expressions (Baker, 1988). Given our proposal that structural Case exists in a one-to-one relationship with phases, we predict that the lack of a phase, while inducing a fatal crash in more familiar languages, will trigger obligatory NI of the lowest argument in languages where this process is available. We present evidence from Oneida and Onondaga (Iroquoian) possessive constructions to this effect.

Analysis: It has been observed that possessors in constructions expressing alienable possession (AP) can function as predicates, (1)a. a property that is absent in inalienable possession (IAP), (1)b. Based on this observation, we follow Alexiadou (1999), Tomioka and Sim (2007), Ura (1996), inter alia, and assume that with IAP the affected object is merged lower than the possessor, as a complement to some Head immediately selected by the V0 root, and depicted as a Low Applicative in (2). Conversely, with AP, V0 selects a Predicate Phrase (see den Dikken 1997), thus yielding the distinct structures for IAP versus AP in (2). Cross-linguistically, possessors in IAP constructions can undergo core argument processes such as reflexivization, (3)a. (Onondaga), and passivization, (3)b. (English), while possessors in AP constructions generally cannot, (4). Following Hornstein (2001) and Kayne (2002), we assume that semantic reflexivity (i.e., identity of reference between two arguments) arises by movement of a DP from a lower argument position to a higher argument position. Furthermore, when both copies of the theta-chain are Case-marked and thus need to be pronounced, given the general Condition on A-Chains (Reinhart and Reuland, 1993), vocabulary insertion of an underspecified D (i.e., the SRFL in Iroquoian) is forced in the lower position. Consequently, IAP constructions can undergo reflexivization because their possessors are structurally higher than the possessed object, (7). Thus, raising of the possessor to SpecvP does not incur a minimality violation, while raising of the possessor in an AP construction would, (8). Interestingly, Oneida exhibits a construction we call a reflexive benefactive, in which the SRFL morpheme is obligatory and signals either possession or a Benefactive reading, (5). For the possessive reading, we assume a structure as for IAP, (see Nichols, 1992 Inalienability Hierarchy). For the Benefactive reading, we assume the Benefactive Goal is merged in a High Applicative domain given linearization facts discussed for Iroquoian in Alboiu and Barrie (2005). Crucially, while in both Oneida and Onondaga, NI is a optional process sensitive to discourse factors, it is obligatory in reflexive possessive constructions, as in (3)a and (5), and in the reflexive benefactive construction in Oneida, (6).

The asymmetric behaviour with respect to NI in reflexive IAP constructions and in the Oneida benefactive reflexives receives a straight-forward account under the approach to Case and phases advocated here. The possessor in question in these constructions originates in the ApplP and raises to the external subject position as diagnosed by the presence of SRFL. With Low Applicatives and IAP, there are three arguments and two phasal domains (vP and CP). Consequently, the possessed argument is forced to undergo NI. Following McGinnis (2003), High Applicatives, such as Benefactives, constitute phasal domains (thereby Case licensing the Theme argument), so such constructions would typically license three arguments in accord with the number of phasal domains (Applhigh, vP, CP). However, with the benefactive reflexive, as with any instance of A-movement, the DP cannot cross a phasal boundary, which implies that this movement voids phasehood of the High Applicative phase (see also Hornstein 2001:137). Consequently, the Theme can no longer get Case and is forced to undergo NI.

Conclusion: We show that a phase-based approach to structural Case is independently supported by instances of obligatory NI in Iroquoian possessive constructions. This is a welcome result as it provides empirical evidence for Chomsky’s feature-inheritance model, whereby A-related features, for example Case, are not intrinsic properties of T or V but of the phase head, specifically C or v.
Examples:

(1) a.  The apples are John’s.
    b.  *The fingers are John’s.

(2) a.  IAP:  V^0 [ApplLow^0 [DP possessor] [ApplLow^0 [DP inalienably possessed object]]]
    b.  AP:  V^0 [PredP [DP alienably possessed object] [Pred^0 [DP possessor]]]

(3) a.  waɁ- t- g- at- nɛntsh- a- dat- Ø
    FACT- DUC- 1.SG.NOM- SRFL- arm- JOIN- raise- PUNC
    ‘I pointed/raised my arm.’
    b.  John was kicked in the back. (=John’s back was kicked)

(4) a.  *waɁ- k- at- nakd- a- gadat- Ø
    FACT- 1.SG.NOM- SRFL- bed- JOIN- raise- PUNC
    (‘I raised my bed.’)
    b.  *John was kicked in the bike. (* on reading where John’s bike was kicked)

(5) waɁ- k- at- wis- a- kalatat- eɁ
    FACT- 1.SG.NOM- SRFL- ice/glass- JOIN- raise- PUNC
    ‘I raised my window up.’ or ‘I raised the window up for myself.’

(6) * waɁ- k- at- kalatat- eɁ owiseɁ
    FACT- 1.SG.NOM- SRFL- raise- PUNC window
    (‘I raised my window up.’ or ‘I raised the window up for myself.’)

(7) [vP ___ v^0 [VP V^0 [ApplLow^0 [DP possessor] [ApplLow^0 [DP inalienably possessed object]]]]

(8) [vP ___ v^0 [VP V^0 [PredP [DP alienably possessed object] [Pred^0 [DP possessor]]]]

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PP licensing in nominalizations

1. In the recent literature the distribution of PPs related to external arguments (agent, instrument, causer) was used as an argument for the presence of semi-functional heads in verbal structure (Alexiadou & al. 2006 (I)). These authors argued that change of state verbs are built up from a root+theme complex (expressing a resultant state) and an eventive verbal head $v_{\text{cause}}$ on top of this complex. Causer PPs in anticausatives are licensed by $v_{\text{cause}}$ (the window broke from the wind). For transitives/passives Voice is added (Kratzer 1994) and agent/instrument PPs are licensed by Voice. Here, applying the same logic, we look at the realization of external arguments as PPs in English, Greek and German nominalizations. The behavior of these PPs suggests cross-linguistic differences as to the distribution of Voice within nominals, but also differences concerning the interpretation of the prepositions used in the respective constructions, offering new insights into nominal structure and the interaction between functional layers and prepositions.

2. In English (Hornstein 1977, Rappaport 1983, Jaeggli 1986, Grimshaw 1990, Fox & Grodzinsky (F&G) 1998 a.o.) the by-phrase in nominals can only be interpreted as agent or causer (1a-b). This is not the case with by-phrases in the verbal passive, which can bear any semantic role, cf. (1c) vs. (1d). A similar situation is observed for German nominalizations in –en derived from anticausative verbs. German anticausatives have two morphological paradigms: one marked with the reflexive pronoun sich (used with öffnen ‘open’) and one without any marking. In the nominalization of öffnen, we find both patterns (with and without sich). These differ systematically. The sich pattern (anticausative) is compatible only with causer PPs (3a), while the non-sich pattern (passive) is compatible only with agent PPs ((2b) both introduced via durch: von cannot introduce an agent, unlike in the verbal domain, as within the DP it is a genitive/possessive marker). The German verbal passive licenses both theta roles. Thus English/German nominals are like Greek/Hebrew verbal passives ((4); Doron 2003, Alexiadou & al. 2006): in all these constructions the by-phrase is subject to an agentivity restriction.

3. (5) suggests that in Greek nominalizations goals/sources/experiencers are licit, on a par with agents and instruments/causers. But nominals derived from verbs lacking a verbal passive can take an agent PP in the nominalization in addition to the causer PP (only the latter is fine in the verbal context (6a-6b&6c-6d vs. 6e); Greek, like German, has two morphological paradigms for anticausatives:Nonactive (6b) and Active (6d/7a). Moreover, de-adjectival verbs have a dedicated passive form in which they license only agent PPs (7b), while their anticausatives only license causers (7a). In nominals, agents and causers are both licit and (7c) is ambiguous between a passive and an anticausative reading. The anticausative reading is expected, give what we know about the root involved (Marantz 1997, Harley & Noyer 2000, Alexiadou & al. 2006), but the passive one is puzzling, as the nominals are derived from roots that don’t require an external argument on the basis of their semantics (6c-7c). This means that Voice must be present for the passive reading to come about, as encyclopedic knowledge about the root couldn’t introduce that. We need then to explain the general agentivity restriction in nominals and the fact that certain Greek nominals seem similar to the English passive (5-1c).

4. In all nominals, nominalizing morphology realizes an n layer. All nominals licensing causer PPs contain vCaus. Agent PPs are licensed by Voice. It has been proposed that -ation nominals lack Voice (Kratzer 1994, Marantz 1997), hence they lack an external argument. On the other hand, it has been argued that Greek nominals contain Voice (Alexiadou 2001) and this is arguably the case for the German nominals in (2b). This explains why agent PPs are fine in these nominals. The prediction is that agent PPs should be out in English nominals, contrary to fact. We propose that the by phrase in Greek nominals (6a&c-7c) can introduce an agent, as nominal Voice can only have a suppressed agent (Alexiadou 2001; Grimshaw 1990). On this view, Greek nominalizations are passive structures (Borer 1993) on the interpretation of the passive in Doron (2003): $n$ modifies the head introducing the external argument and reclassifies this as agent. The same holds for German (2b). As for (5), following Doron (2003), we assume that here the goal/experiencer argument appears as a requirement of the root and not of the passive/nominalization. When this root is nominalized, the PP is licit, much like in the corresponding verbal construction (8). English shows an agentivity restriction in the absence of Voice (1d) due to a special property of the preposition involved (F&G 1998): in English NPs the preposition by is strictly related to the role of Actor/creator, as shown by the grammaticality of a book by Chomsky, thus (1d) is out. This is not the case in Greek, where apo, much like its Hebrew counterpart, is only found with verbal passives and nominalizations and never with object nominals.
Data

(1) [Voice [V_{caus} [Root +theme]]]

a. the imprisonment of refugees by the government
b. the destruction of the city by lightning
c. The package was received by John
d. *The receipt of the package by John

(2) a. ??das sich Öffnen der Türen durch Peter
the REFL open-en the-gen doors through Peter
b. das Öffnen der Türen durch Peter
the open-en the-gen doors through Peter
c. *das Öffnen der Türen von Peter
*das sich Öffnen der Türen von Peter

(3) a. (?)das sich Öffnen der Türen durch den Wind
the REFL open-en the-gen doors through the wind
b. *das Öffnen der Türen durch den Wind
the open-en the-gen doors through the wind
c. *das sich Öffnen der Türen vom Wind
*das Öffnen der Türen vom Wind

(4) a. to pukamiso stegnothike apo to Jani/*me ton aera
the shirt dried-Nact by John /*with the wind
b. ha-gader porqa 'al-yedey ha-mafginim/* me-'acma
the wall dismantle-Intns-Pass by the demonstrators/*by itself
‘The wall was dismantled by the demonstrators/*by itself.’

(5) i paralavi tu paketu apo to Jani
the receipt the package-gen by John

(6) a. to kapsimo tu dasus apo ton Jani/apo ti zesti
the burning the forest-gen by John/from the heat
b. To dasos kaike apo ti zesti/*apo to Jani *passive
the forest burnt-Nact by the heat/*by the John
c. to adiasma tu kutiu apo to Jani/apo ton aera
the emptying the box by John/from the wind
d. To kuti adiase apo ton aera/*apo to Jani
The box emptied by the wind/by the John
e. *To kuti adiastike apo to Jani *passive
the box emptied-Nact by John

(7) a. I porta anikse apo ton aera/*apo to Jani
The door opened by the wind/by John
b. I porta anihntike *apo ton aera/*apo to Jani *passive
the door opened-Nact by the wind/*by the John
c. to anigma tis portas apo ton aera/*apo to Jani
the opening the door by the wind/*by the John

(8) to vivlio paralifthike apo to Jani
The book received-Nact by John
The book was received by John

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Yet More Evidence for the Emptiness of Plurality

Alan C. Bale (MIT)

In this talk, I present 3 problems for a Link-style ([L1]) plurality operator which creates sums from singularities (see 1). All 3 problems involve measure nouns with pseudo-partitives ([S2]). As I will show, these problems can be overcome if NPs are inherently plural and if the plural morpheme is meaningless (cf. [S1] & [B1]).

3 Problems: (i) The 1st problem for a Link-operator involves the phrase pound of potato. This phrase can be used to refer to a variety of pounds even when the context only contains a 2-pound lump of mashed-potato. One can point to the left and right half of the lump and talk about this pound of potato to the left and that pound of potato to the right (l and r). Similarly, one can point to the bottom and top and talk about this pound of potato on top and that pound of potato on bottom (b and t). Given these facts, the denotation of pound of potato is expected to be minimally \{r,l,b,t\}. If a plurality operator were applied to this set the result would include the groups \{r,l\}, \{b,t\}, and \{r,l,b\}. Such a denotation incorrectly predicts that the phrase three pounds of potato could be used coherently (given the group \{r,l,b\}). It also incorrectly predicts that the phrase the two pounds of potato should have a presupposition failure since there is no unique two-pound group (given both \{r,l\} & \{b,t\}). (ii) Numbers less than one (such as 0.5) are problematic for a Link-operator in that they require plural marking. Although, 0.5 grams of trans fat is an acceptable phrase *0.5 gram of trans fat* is not. Considering that a Link-operator only creates sums, this requirement is mysterious. (iii) The final problem for Link stems from the behavior of grams of apples. Just as one can buy two pounds of apples, one can also buy 900 grams of apples. An analysis of grams with a Link-operator would have to assume that the denotation of gram of apples is the set of singular grams of apple-stuff. The plural operator would form groups from these singulars to produce a group containing 900. Yet, this analysis could not possibly be right. It predicts that 30 grams of apples and one gram of apples should be as acceptable as 900 grams of apples. However, given that an apple weighs over 150 g, both phrases are distinctly odd. In fact, one gram of apples has an empty denotation. It is difficult to imagine how sums could be formed if the singular is empty. One Solution: All 3 problems disappear if a Link-style operator is abandoned and if the interpretation of the NP is not limited to singularities. For example, the NPs gram of apples and pound of potato (without SG or PL) could have the interpretations in (2c&d). Accordingly, these NPs would denote the set of all groups of apples (measurable in terms of grams) and the set of all potato-aggregates (measurable in terms of pounds). If the plural morpheme is interpreted as an identity function – as in (3a), then such a morpheme would not affect the interpretation (see 3b). Note this already solves the problem in (i). The denotation of pounds of potato will contain all the different ways of creating singular pounds but it will not contain a 3-pound aggregate (since no such aggregate exists in the context). Furthermore it will contain only one 2-pound aggregate (since only one such aggregate exists in the context). In contrast to plurality, the singular morpheme and the numerals can be interpreted as restricting the denotation of the NP to sums that measure 1 or n. This restriction can be achieved by employing mechanisms in Dynamic Predicate Logic ([G&S]) where \exists has the effect of binding outside of its scope – i.e., \(\exists d(\phi & \psi)\) is equivalent to \(\exists d(\phi & \psi)\). By specifying that d is equal to 1, the singular morpheme restricts the NP to aggregates measuring 1, see (3c) and (3d). By specifying that d is equal to 900, 30 and 0.5, the numeral morphemes restrict the NP to aggregates measuring 900, 30 and 0.5 respectively – see (4) and (5). This interpretation of numerals solves the problems in (ii) and (iii). For (ii), the singular morpheme restricts the denotation of the NP to aggregates that measure one unit and excludes aggregates that weigh less than one unit. In contrast, the plural morpheme has no such restrictions – hence why 0.5 requires plurals. For (iii), the denotation of the NP 30 grams of apples is empty since there are no aggregates that contain at least one apple and weigh 30 g. However, the denotation of 900 grams of apples need not be empty since such aggregates can contain many apples. Note that other nouns can be incorporated into this type of semantics by specifying a function that measures
aggregates in terms of individuals instead of grams or pounds, see (6). Thus all nouns interact with plurals in the same way. This type of solution has further implications for the count/mass distinction and the semantic treatment of pseudo-partitive constructions.

(1) Link-style plurality operator: 
\[ [[PL]](X) = \text{POW}(X) - \emptyset \] (the power set of X subtract the empty set).

(2) a. 
\[ [[\text{gram}]] = \lambda P \lambda x \exists d (P(x) \& \gamma(x) = d), \] where \( \gamma \) measures a sum in terms of grams.

b. 
\[ [[\text{pound}]] = \lambda P \lambda x \exists d (P(x) \& \pi(x) = d), \] where \( \pi \) measures a sum in terms of pounds.

c. 
\[ [[\text{gram of apples}]] = \lambda x \exists d ([[\text{apples}}](x) \& \gamma(x) = d), \] where [[apples]] denotes the set of all groups of one or more apples in a given context.

d. 
\[ [[\text{pound of potato}]] = \lambda x \exists d ([[\text{potato}}](x) \& \pi(x) = d), \] where [[potato]] denotes the set of all potato-aggregates in a given context.

(3) a. 
\[ [[PL]] = \lambda P(P) \] (The identity function on predicates)

b. 
\[ [[\text{grams of apples}]] = [[PL]]([[\text{gram of apples}}]]) = [[\text{gram of apples}}]] \]

c. 
\[ [[SG]] = \lambda P \lambda x (P(x) \& d = 1) \]

d. 
\[ [[SG \text{gram of apples}]] = [[SG]]([[\text{gram of apples}}]]) = \lambda x (\exists d ([[\text{apples}}](x) \& \gamma(x) = d) \& d = 1) \]
due to DPL, this is equivalent to \( \lambda x \exists d ([[\text{apples}}](x) \& \gamma(x) = d \& d = 1) \), where the existential quantifier scopes over \( (d = 1) \).

(4) c. 
\[ [[900]] = \lambda P \lambda x (P(x) \& d = 900) \]

d. 
\[ [[30]] = \lambda P \lambda x (P(x) \& d = 30) \]

e. 
\[ [[0.5]] = \lambda P \lambda x (P(x) \& d = 0.5) \]

(5) a. 
\[ [[900 \text{ grams of apples}]] = [[900]]([[\text{grams of apples}}]]) = \lambda P \lambda x (P(x) \& d = 900) \lambda x \exists d ([[\text{apples}}](x) \& \gamma(x) = d) \]
\[ = \lambda x (\exists d ([[\text{apples}}](x) \& \gamma(x) = d) \& d = 900) \]
and due to DPL, this is equivalent to \( \lambda x \exists d ([[\text{apples}}](x) \& \gamma(x) = d \& d = 900) \), where the existential quantifier scopes over \( (d = 900) \).

b. 
\[ [[30 \text{ grams of apples}]] = [[30]]([[\text{grams of apples}}]]) = \lambda P \lambda x (P(x) \& d = 30) \lambda x \exists d ([[\text{apples}}](x) \& \gamma(x) = d) \]
\[ = \lambda x (\exists d ([[\text{apples}}](x) \& \gamma(x) = d) \& d = 30) \]
and due to DPL, this is equivalent to \( \lambda x \exists d ([[\text{apples}}](x) \& \gamma(x) = d \& d = 30) \), where the existential quantifier scopes over \( (d = 30) \).

(6) 
\[ [[\text{cat}]] = \lambda x \exists d (\text{CAT}(x) \& |x| = d), \] where \(||\) measures a sum in terms of minimal parts and where CAT is the concept of cat-ness.

REFERENCES:


On the interpretation of pronouns in Spanish imperatives
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Introduction: Imperatives in Spanish can have various forms, of which I will only be concerned with two: positive imperatives marked with morphology known as imperative morphology (MFIs) and positive imperatives expressed with bare forms (BFIs). I provide an analysis of the pronouns associated with these two forms of the imperative. I show that the interpretation of the pronouns varies with respect to number and person features, and I also show that the +/- telic nature of the predicate matters. This discussion of the interpretation of pronouns can take place independently of the derivation of imperative force and an IMPerative operator. The Spanish data offers a wider range of interpretations than those that motivate the analysis of pronouns in imperatives as logophors in Portner (2004). My conclusion will be that small differences in the feature make-up of the pronouns can have subtle effects in the interpretation, and that the underspecification of features in BFIs opens up interpretative possibilities unavailable to MFIs.

The two types of imperatives are exemplified in (1), and some differences noted (others will follow).

Two preliminary analysis: (a) Pronouns without a specific referent or overt controller are known as proarb (a.o.Jaeggli 1986). Condoravdi (1988) and Kim (1991) discuss third person proarb$s in non-imperative contexts. On the basis of quantificational variability effects, they argue for a Heim-indefinite analysis. An example is given in (2), where a generic operator binds the variable introduced by proarb. However, this analysis is not correct for the agent of imperatives. Consider the BFI example in (4). The quantificational force of the subjects vary, even though there is no difference in terms of contextual operators (presumably). (b) An alternative could be to consider that the pronoun in imperatives receives a ‘whatever’ interpretation (von Fintel 2000): in the absence of a specific referent, the choice of referent is ‘free choice’. However, while the speaker may choose certain forms to indicate speaker indifference (‘alguien’), the pronoun in imperatives does not give rise to a ‘whoever’ interpretation. Consider (5).

The Proposal. Both BFIs and MFIs have a pronoun in the spec of vP. In the case of MFIs, there are morphological features for second person, and for either singular or plural number. In the case of BFIs, there are no such features, and I take it that the pronoun is not specified for either person nor number. Pronouns bear an index, and are interpreted via standard variable assignments. The features on pronouns trigger presuppositions (following Heim & Kratzer 1998). The pronoun in MFIs bears features that require that its denotation be the addressee(s). The pronoun in BFIs does not, but the order is interpreted as including the addressee in the context of utterance. The key differences between the pronouns have to do with the presence/absence of plural and second person features. When the denotation of the pronoun is plural, the speaker expects all members of the plurality to be active in obeying the order. Use will be made of Schwarzschild’s theory of covers for pluralities (Schwarzschild 1996) to explain how such plural denotations may at times be structured into smaller units. Different aspects of the proposal will be illustrated below with examples ((1) already illustrates the difference in number).

a. Person features. BFIs-pronouns are not specified for person, MFI-pronouns are 2nd person. See (6).

b. Interaction with telicity. The requirements on the agent(s) can vary with the telicity of the predicate, both in BFIs and MFIs (this is exemplified here with MFIs). See (7).

c. On the specificity of MFIs vs. BFIs. Speakers report intuitions that indicate that the agent in BFIs is ‘less specific’ than in MFIs. See (8).

Female boarding school run by nuns. It is study time. The girls are in a room and the nun in charge of keeping an eye on them is in a contiguous room. The whispering gets too loud but the nun does not know who nor how many girls are talking. She says:

a. Bare form imperative (BFI): ¡Callar!        
   shut-up.Inf

b. Marked form imperative (MFI): #¡Callad!        
   shut-up.2.pl.Imp

If the nun does not know how many girls are whispering (it could be just one!), she would not utter (1b). The choice of (1a) is compatible with a singular or plural whisperer. There is no specific addressee.

In this place they eat raw meat’ [Condoravdi 1988]

‘In this place they eat raw meat’

(a) ¡Cerrad las ventanas!   
   close.2.pl.Imp windows

(b) ¡Cerrad la ventana!   
   close.2.pl.Imp the window

In general, a plural addressee leads to plural responsibility for fulfillment of the command, and plural agency. This is not what we see in telic (7b) (the command would be fulfilled as soon as change of state was achieved (see Smith (1997) for definition of telicity). If such a command is addressed to a large group, they would collectively be responsible for its fulfillment, but they could not all plausibly be agents. Exceptionally, plural responsibility does not result in plural agency. In atelic (7a), there is plural responsibility and plural agency. Everybody closes windows. Such ‘distributive flavor’ is obtained because the members of the plural addressee are agents of the subevents that make up the (atelic) event of closing windows. The subevents that make up atelic events are atelic events of the same kind.

The windows of the monastery have to be closed before everybody goes to sleep. The abbot says:

a. ¡Cerrad las ventanas!   
   close.2.pl.Imp the windows

b. ¡Cerrad la ventana!   
   close.2.pl.Imp the window

c. Dije, “¡cerrad/#cerrar las ventanas!” (‘I said, “close the windows!”’ )

The abbot wouldn’t scold the novices with a BFI. It would be easier for the novices to distance themselves from the command. They cannot do so with MFI, where there is a second person feature.
Gradual learning of phonotactic constraints

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Learning algorithms in Optimality Theory (OT) standardly assume an innate constraint set: the learning task consists of finding a ranking for the constraints based on positive language data (e.g. Tesar and Smolensky 1998). The challenge of phonotactic learning is to find a restrictive ranking, i.e. one that rules out ungrammatical forms; this challenge is usually addressed by imposing a bias for faithfulness constraints to be ranked low (Smolensky 1996; Hayes 2004; Prince and Tesar 2004). In this paper we show that phonotactic constraints themselves can be learned incrementally from positive language data, and that a restrictive grammar can be learned with these constraints and a low faithfulness bias, if OT’s ranked constraints are replaced with weighted constraints, as in Harmonic Grammar (HG; Smolensky and Legendre 2006).

Hayes and Wilson’s (2006) model of phonotactic constraint learning posits a set of phonological features that are used to create all logically possible constraints conforming to a schema. Constraints are then selected from this set on the basis of their suitability for constructing a statistical model of the distribution of features in a corpus of linguistic forms. We follow Hayes and Wilson in postulating a set of features that are combined by way of constraint schema. We depart from their model, though, in that our learner learns incrementally. It starts out with an empty constraint set, and subsequently constructs the constraints that are true of each phonological form as it is encountered. In the toy example we present in this abstract, we limit the constraints to statements about the immediate segmental context: for every segment (phones, the word beginning and the word end), the learner creates a constraint that states which segment follows. For example, for the word [ba], the learner creates 3 constraints: /b> /given the beginning of a word, [b] follows’, b>a ‘given [b], [a] follows’ and a>/ ‘given [a], the word end follows’. These constraints are violated by sequences that contradict them. The tableaux in the appendix contain the constraint set thus constructed for the vocabulary [ba], [bla], [na] and [la]. These constraints were given an initial weighting of 100; the constraint, Faith, which penalizes an unfaithful null parse, was given an initial weight of 10.

The tableaux show the results of gradual learning using the standard settings in the Praat program, with the learner set to HG evaluation (see Boersma and Weenink 2007; Pater 2007). All of the existing forms are correctly selected over their unfaithful competitor. Crucially, ill-formed [bna] loses to the null parse, as desired. This result depends on HG evaluation. When this simulation is run with OT evaluation, Faith winds up both above b>a, (so that [bla] is preferred over the null parse) and above b>l (so that [ba] surfaces faithfully). The problem is that this ranking will also pick [bna] over the null parse. In the learned HG system, [bla] and [ba] surface faithfully because the weight of Faith is greater than each of b>a and b>l, but [bna] is ruled out because the sum of the weights of b>a and b>l is greater than Faith. Such gang effects are impossible in OT.

This toy example shows that learning of phonotactic constraints, and their weighting, can in principle be accomplished with very limited computational resources, much more limited than those Hayes and Wilson avail themselves of. The challenge for the further elaboration of this approach, some of which we present in the full paper, is to determine how much of phonotactic learning can be explained with this simple model.


Licensing negative constituents and negative concord

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Serbo-Croatian (SC) has two negative series, ni-NIs, which require clause-mate Neg, and i-NIs, which don’t tolerate it. I-NIs co-occur with long-distance Neg and can occur in some non-negative contexts (1-2, objects pattern with subjects). Progovac (1994) gives a binding account (BA) of SC NIs based on A’-binding: ni-NIs are subject to Con. A; they must be A’-bound by Neg in their governing category (GC). J-NIs are anaphoric pronouns, subject to Con. B: they must be A’-free in GC, but bound within the sentence. Since GC in (3) is the lower IP, ni-NIs can only be licensed by the clause-mate Neg, while i-NIs can be licensed by a higher Neg or a non-negative licensor. I present a new reconstruction paradigm that can’t be captured under BA and propose an analysis that accounts for it.I argue ni/i-items are not subject to different binding conditions, but differ regarding whether or not they move to NegP, in particular, ni-NIs move to SpecNegP (4a). Under this movement analysis (MA), we can adopt (4b), where iko is spelled-out as niko as a reflex of a Spec-head configuration with Neg. The analysis easily handles (1-2), since the NI can be located/pass through SpecNegP only in (1a). Consider now the reconstruction data in (5-7). We could account for (5) by adopting NI reconstruction. This won’t work due to (6). If the reconstruction is obligatory, we incorrectly predict (6b) to be good and (6a) bad. ((6b) is in fact incompatible with reconstruction even as an option.) But (7) shows we need reconstruction. We thus have a contradiction at our hands, with (7) requiring reconstruction and (6) incompatible with it. There is, however, a generalization here, given in (8). BA can’t handle these data no matter what we assume regarding satisfaction of binding conditions under reconstruction. E.g., if we allow it even as an option, which is needed for (7a), (6b) can’t be handled. NIs behave differently from anaphors/pronouns under reconstruction, which argues against BA. The data receive a principled account under MA, where we get ni-items if NIs move to SpecNegP. Many authors have argued successive cyclic movement targets every phrase on its way (Bošković 2002, Boeckx 2003, Chomsky 2005, Fox & Lasnik 2003, Müller 2004, Manzini 1994, Takahashi 1994), which I also assume. NIs moving above NegP, as in (5-7), then must pass through SpecNegP, which only ni-NIs are compatible with. MA thus explains why only ni-NIs are acceptable in reconstruction contexts. It also explains why only ni-NIs can be used in elliptical answers. I argue (9a) is derived as in (9b), where the NI moves above NegP, its movement through SpecNegP being forced by locality, which is followed by NegP ellipsis. Since the NI passes through SpecNegP, only a ni-item is possible here. (I argue for NegP deletion based on the fact that we get genitive of negation, which requires negation, with ellipsis in Slovene.)

I argue i-NIs are impossible with clause-mate Neg (10) because all NIs must undergo focus movement. Consider the morphology of SC NIs (11). Both ni and i-NIs contain a focal marker (used as focal even). Since SC has obligatory focus movement (Bošković 2002), the focal marker forces NIs to move to FocP. Since FocP is located above NegP (cf. (12a), where Asmir must precede Neg), the NI in (12b) must pass through SpecNegP. This isn’t the case with long-distance cases (12c), since here an i-item can move to FocP within the embedded CP. I argue that in the marginal (13b), the NI undergoes focus movement, followed by remnant NegP fronting (14), which is marginally available (I give independent evidence that niko in (13b) doesn’t stay in situ). Since even this kind of examples involve movement through SpecNegP, i-NIs are impossible (13c).

Under the proposed analysis all movement NIs undergo is morphologically motivated: i motivates movement to FocP, and n to SpecNegP. The focus movement analysis is confirmed by the fact that where focus movement is impossible, as in infinitives (15), NI fronting is also impossible (16).

Consider now the feature make-up of Neg/NIs. I argue (17) holds for NIs. Neg co-occurring with NIs must have the uNeg feature, otherwise (18) would have the unattested double negation reading (19). This also explains why it’s possible for a non-negative sentence to be an antecedent for a negative sentence in (9). Merchant (2001) argues the identity condition on ellipsis is semantic. Since negation with NIs has uNeg, the elided part of (9b) is not semantically negative. However, negation in (20) must have iNeg, otherwise (20) could have non-negative interpretation. There must then be two negative heads (21). The current analysis ensures the right distribution for these heads. Neg B must co-occur with an NI so that its uNeg feature can be checked (NI’s uF is checked as a reflex of this feature checking). Neg A can never co-occur with an NI (the co-occurrence would yield unattested DN). Since it doesn’t have an uninterpretable feature Neg A can’t probe the NI (see (22)), so the uF of the NI would remain unchecked. This analysis correctly captures the interpretation of Neg and NIs and resolves the identity condition on ellipsis problem regarding (9). The analysis also provides syntactic implementation of Van der Wouden’s (1994) semantics for negation, Neg A corresponding to the negative operator function reversing truth conditions and Neg B to Van der Wouden’s identity function negation that conserves truth conditions, which is argued to provide a semantic argument for the analysis.
(1) a. Niko/*iko ne ide u školu.
   nobody/anyone neg goes to school
   “Nobody goes to school.”

   (the gloss is given for ease of exposition; niko/*iko do not correspond to English nobody/anyone)

   b. Milena neg tvrdi da iko/*niko ide u školu.
   Milena neg claims that anyone/nobody goes to school

(2) Milena će biti otpuštena ako iko/*niko ide u školu.
   Milena will be fired if anyone/nobody goes home

(3) [IPNeg[CPOp]IPNeg[VP ni/i] (Op in CP is the licensor in non-negative contexts)

(4) a. [NegP niko [Neg neg
   b. [NegP iko [Neg ne =niko

(5) Nikoga/*Ikoga Marko nije poljubio.
   nobody-acc/anyone-acc Marko-nom neg+is kissed
   ‘Marko did not kiss anyone.’

   nobody-acc you neg+are claimed that is kissed
   “You did not claim that he kissed anyone.”

   b. *Ikoga ti nisi tvrdio da je poljubio.

   nobody’s car you claim that neg+is stolen
   “You claim that he did not steal anyone’s car.”


(8) Ni-NIs are always acceptable in reconstruction contexts, while i-NIs are always unacceptable in such contexts (regardless of whether they involve clause-mate or long-distance negation in both cases)

(9) a. Šta kupuješ? Ništa/*štā.
   “What are you buying? Nothing.”

   b. Ništa [NegP t ne kupujem t]
   nothing neg buy

(10) a. *Ikoga ne voli.
   anyone-acc neg loves
   “He does not love anyone.”

   b. Ivan ne tvrdi da ikoga voli
   Ivan neg claims that anyone-acc loves
   “Ivan does not claim that he loves anyone.”

   c. *Ne voli ikoga.

(11) n(neg)+i(focus (‘even’))+ko(who)

(12) a. AMIRIRA ne voli.
   Asmir-acc neg loves
   “He does not love ASMIR.” (capital letters indicate contrastive focus)

   b. [FocP [NegP [ NI (cf. (10a))
   c. [NegP [CP [FocP [ NI (cf. (10b))

(13) a. Nikoga ne voli.
   nobody-acc neg loves-3p
   “He does not love anyone.”

   b. *Ne voli nikoga.

   c. *Ne voli ikoga.

(14) i. [NegP nikoga, [Neg ne voli t] ii. [FocP nikoga, [NegP t[Neg ne voli t] iii. [NegP t[Neg ne voli t] [FocP nikoga, t

(15) a. ?*Asmir (ne) želi MILENU vidjeti.
   Asmir neg wants Milena-acc to-see
   “Asmir does not want to see MILENA.”

   b. cf. MILENU (ne) želi vidjeti
   “Asmir does not claim that he wants to see anyone.”

   c. *Asmir ne želi nikoga/ikoga vidjeti.
   Asmir neg wants nobody/anyone to-see
   “Asmir does not want to see anyone.”

(17) NI: iNeg, uF (i=interpretable, u=uninterpretable. uF is checked as a reflex of neg-feature checking)

(18) Niko ne spava
   nobody neg sleeps
   Negative concord reading (Nobody sleeps): OK
   Double negation reading (DN): *

(19) Niko (iNeg)...negation (iNeg)... = DN

(20) Marko ne spava.
   Marko neg sleeps
   ‘Marko is not sleeping.’

(21) Negation A: iNeg Negation B: uNeg (lack of Neg B in a language leads to the lack of neg. concord)

(22) The Activation Condition: Both a probe and a goal must have an uninterpretable feature (Chomsky 2000)
1. **Background** It is well-known that, given current assumptions about the denotations of quantificational determiners, quantified noun phrases in object position cannot be interpreted in the same way as their counterparts in subject position. In grammars that assume semantic typing, this problem is framed in terms of a *type mismatch* between the transitive verb that denotes a function from entities to functions from entities to truth values (i.e. type $< e, < e, t >$) and the quantified object whose denotation is of type $<< e, t >, t >$. Strategies to repair this mismatch have taken two main forms: an analysis where the QNP covertly moves to a position where it can take a property (an element of type $< e, t >$) as an argument (the *quantifier raising* approach of May (1985)), and another analysis whereby either the QNP or the verb is transformed into an element of the appropriate type via a *type-shifting* rule (as in Montague (1974); Partee & Rooth (1983); Hendriks (1987)). In the literature, these approaches are viewed as competing alternatives which must be compared in the search for the single correct analysis (c.f. Heim & Kratzer (1998)).

2. **Problem** We present a case of another type-mismatch, this one particular to French. We argue that recourse to both movement and type-shifting repair strategies are necessary to account for data concerning non-canonical quantification in this language. In French, quantification over individuals is canonically realized by means of a quantificational determiner (examples shown in (1)). However, as discussed by Kayne (1975); Obenauer (1994); Doetjes (1995) *inter alia*, it can also be accomplished by means of a construction in which a subclass of these determiners (the ones which are homophonous with quantificational adverbs) occupy the preverbal position of adverbs and yet still quantify *at a distance* (QAD) over the object. Thus sentences such as (2) are ambiguous between the iterated event reading of the adverb (2a) and a reading that is semantically and illocutionarily identical to (1a). Firstly, we show that the *de*-phrases that form the QAD object reading display the same characteristics as noun phrases that are commonly assumed to denote properties, i.e. those that are hypothesized to participate in pseudo-incorporation (van Geenhoven (1998); Dayal (2003) *i.a*). For example, when placed in a sentence with an intensional verb such as *chercher* (to look for), *de*-phrases with the QAD object reading are always interpreted as *de dicto* (3). Since *de*-phrases are of type $< e, t >$, they cannot be interpreted adjacent to the transitive verb. We are therefore faced with another type-mismatch situation, this one involving elements of type of $< e, t >$ rather than the type $<< e, t >, t >$ of quantified objects. Although a priori we could invoke the same movement/type-shifting debate as with QNPs, we show that the adoption of a single type-repair strategy over another will fail to account for the ambiguity between the event reading and the object reading of (2).

3. **Proposal** Based on data from Cyr (1991) that suggests that movement of a constituent from inside the DP has occurred in the object reading, we propose that, to form this interpretation, the *de*-phrase covertly raises from its base-position to a position where *beaucoup*, a second-order relation of type $<< e, t >, << e, t >, t >>$, can take it as its argument. Since, in this reading, the *de*-phrase never acquires any quantificational force, it is always interpreted as *de dicto*. Based on the fact that, in the event reading, *de*-phrases display the same interpretative behaviour as other indefinites, we propose, following Reinhart (1997) and Winter (1997), that the phrase stays *in situ* and becomes the argument of a *choice function*, an operation that can be viewed as a type-shifting operation (Chung & Ladusaw (2004)). Thus both movement and type-shifting repair strategies are operative in the QAD phenomenon in French.

4. **Consequences** Our study of type-mismatch resolution in French serves to cast the movement vs type-shifting in quantified objects debate in a new light. We suggest that these two proposals are not necessarily mutually exclusive, as has been presupposed in literature, but that the movement
and type-shifting strategies may in fact cohabit harmoniously in the grammar.
(1) a. J'ai vu beaucoup de films
   'I have seen a lot of films'
b. J'ai vu cinq films
   'I have seen five films'
c. J'ai vu tous les films etc.
   'I have seen all the films'

(2) J'ai beaucoup vu de films

   a. There has been many events of me seeing movies (event reading)
   b. I have seen a lot of movies (object reading)

(3) Hier, à la bibliothèque, j'ai beaucoup cherché de livres pour mon travail de syntaxe
   'Yesterday, at the library, I looked for (a lot) of books for my paper of syntax'
   1. ...parce qu'une longue bibliographie donne l'air intelligent de dicto reading
      '...because a long bibliography makes one look smart'
      '...notably, Kayne (1975), Obenauer (1994) and Vinet (2001)'

Selected References

Doetjes, J. (1995). “Quantification at a Distance and Iteration”. In the Proceedings of NELS 25.
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LABELING CONFLICTS
A theory of syntactic labeling and some of its consequences on movement and binding

Introduction. In this talk we propose a minimalist theory of labeling and discuss its consequences in three empirical domains, namely the syntax of free relatives, Principle C effects and conditions that favor phrasal movement over head movement.

The Labeling Algorithms. Building on Chomsky (2005), we propose that two algorithms suffice to properly label every syntactic object. They are the Head Algorithm in (1), which dictates that a lexical item transmits its label when it is merged with another object, and the Probing Algorithm in (2).

(1) Head Algorithm
   In \{H, α\}, H a lexical item (LI), H is the label

(2) Probing Algorithm
   In \{α, β\}, α the probe of merge between α and β, α is the label

Assuming (2), the target “projects” in movement (= Internal Merge) configurations, because it is always the probe of the operation. But (2) applies across the board to cases of external merge as well, if we assume that external Merge is Probe-driven just as internal-merge is.

Free Relatives and (Embedded) Questions. An interesting consequence of this system is that, since it contains two labeling algorithms, it predicts that there might exist cases of conflict. One such case is structures like (3).

(3) What you read

In (3) a lexical item (what), which should become the label in compliance with the Head Algorithm, is (internally) merged with a syntactic object that, being the probe of the operation, should become the label in compliance with the Probing Algorithm. This conflict produces two alternative outputs (a question, as in I wonder what you read and a free relative, as in what you read is interesting) that are both legible at the syntax/semantics interface. This approach has various advantages which we will discuss in our talk, the most obvious being that it explains for free the robust cross-linguistic generalization that free relatives are not possible with wh-phrases (cf. 4).

(4) *I read what book you read

Apparent exceptions (e.g. whatever book you read is interesting) will be addressed in detail.

Phrasal and Head Movement. Assuming a system that contains both the algorithms (1) and (2), cases like (5), which are traditionally analyzed as phrasal movement cases, can be re-analyzed as head movement cases (the Probing Algorithm in (2) ensures the desired output in (5) even if what is a lexical item).

(5) I wonder what you like

This allows a minimally simple analysis with no need to postulate an invisible phrasal structure embedding what in (5). Still, this analysis raises the question why head movement is not always an option, for example why can’t the wh determiner leave its restriction in situ, at least in the typical case (cf. the contrast between 6 and 7)?

(6) *I wonder what you like book
(7) I wonder what book you like
After discussing various attested cases in French, German and Italian (cf. 8 to 10) in which the *wh* determiner does move alone, we will attribute the obligatoriness of phrasal movement in cases like (6-7) or (10b) vs (10a)) to the presence of overt agreement between the *wh* determiner and its restriction.

(8) Combien as-tu lu de livres
   How-NEUT have-you read of books
   ‘How many books have you read?’

(9) Was hat Johann fur Bucher gelesen?
   What-NEUT has Johann for books read
   ‘Which books has Johann read?’

(10) a. Quanto sono alti?
    How-NEUT-SING are tall-MASC-PL.
    ‘How tall are they’?
   b. Quanti libri hai letto
    How-MASC-SING books have read
    ‘How many books have you read?’

We will discuss how this freezing effect of agreement can be captured in a precise way leading to a minimalist theory of pied-piping.

**Principle C Effects.** Assuming (1) and (2), one can explain the presence of Principle C effects (cf. 12 in the intended reading) as cases of mislabeling. Keeping to the minimalist insight, we assume the Inclusiveness Condition, which bans the use of indexes. So two categories get the same semantic value either as a result of some syntactic operation or by accidental coreference (which we do not discuss here). In particular, we assume that a pronoun and a proper name can get semantically co-valued by entering in a Probe-Goal relation, in which the Goal (the proper name) referentially values the Probe (the pronominal). We will discuss some cases, like (11), in which this Probing is unproblematic and results in the two DPs having the same referential value.

(11) He is John

If *he* probes *John* and transmits its label in compliance with the head algorithm (1) at the small clause level, the labelling output is licit because the small clause, involving the merging of two DPs, is compatible with a DP label, as we will show. On the other hand, the same Probing mechanism for referential valuation becomes problematic in standard Principle C configurations like (12).

(12) *He* likes John

The illicit reading of (12) emerges if the Probe (*he*) is referentially valued by the Goal (*John*). The source of the problem is that here when *he* probes *John* and transmits its label, in compliance with the Head Algorithm (1), the labeling output is illicit, because the sentence would receive a nominal label and the derivation would crash at the semantic interface. The (licit) reading of (12) in which *he* and *John* are disjoint in reference is licensed when the Probing Algorithm (2) applies. In cases like (13) the pronoun cannot act as a Probe (since the proper name is not in its c-command domain).

(13) John loves his mother

The two DPs are co-valued through semantic binding, assuming that proper names can QR (cf. Heim and Kratzer 1998). The conclusion is that there is no need to postulate Principle C as a primitive, since Principle C effects can be reduced to mislabeling cases.

**References**


Genitive Subject Induced Derivational Islands
Pritha Chandra (University of Maryland) & Atakan Ince (University of Maryland)

The aim of this study is to show that Genitive Subjects induce derivational islands in Hindi-Urdu in that they block extraction of any DP that they c-command in both (short/long-distance) scrambling and sluicing structures. Additionally, with regard to sluicing, we argue – based on the data from island-effects with Genitive Subjects - that there is syntactic structure in the ellipsis domain that is deleted at PF (contra Culicover & Jackendoff 2005).

Mahajan (2005) shows that Genitive Subjects can be scrambled out of Complex Noun Phrase (CNP) and adjunct islands (ex. 1-2, respectively), but non-Genitive phrases cannot (ex. 3-4, respectively). This leads him to conclude that clauses containing Genitive Subjects are islands for movement for both scrambled elements and wh-phrases in sluicing structures.

We take issue with this observation and argue that the Genitive Subjects themselves (and not the clauses containing them) are islands. The evidence for this is the data (ex 1-2) where Genitive Subjects are extracted out of these clauses. Since extraction of Genitive Subjects does not yield unacceptability, these clauses cannot be islands for movement. The question then arises: what underlies the unacceptability of (ex. 3) and (ex. 4) with non-Genitive DP extraction? Our answer to this is: the Genitive Subjects themselves block extraction of non-Genitive phrases.

First it must be noted that in the presence of c-commanding Genitive Subjects, non-Genitive DPs are barred from even short distance scrambling to the periphery of the intermediate clause. As shown in (ex. 5), the non-Genitive DP cannot move past the Genitive Subject to the clause periphery indicated by a low-reading adverbial. Under the assumption that short-distance scrambling involves TP-adjunction (Kidwai 2000), such movement is predicted to be acceptable as it does not cross the alleged island inducing clause. We therefore take the unacceptability of such cases to indicate that the Genitive Subject is the intervener. The second piece of evidence is that when there is a Genitive DP that does not command the (wh-)phrase, both sluicing and scrambling are acceptable. A scrambled DP (ex. 6) or a wh-phrase (ex. 7) in a sluiced structure can occupy a position outside the clause containing the Genitive DP. The third piece of evidence comes from island-insensitive sluicing sentences. Sluicing in Hindi-Urdu is insensitive to strong islands (ex. 8). Since wh-phrases in these structures can otherwise cross boundaries of strong (CNP and adjunct) islands, island-sensitivity with Genitive Subjects shows us that the Genitive Subjects block movement of the wh-phrase in the sluicing structure.

The reason Genitive Subjects form derivational islands in the language, we argue, is because they occupy A-bar specifiers. Scrambled DPs and sluiced wh-phrases that must also target A-bar positions are then barred from crossing these Subjects, as their movement trigger minimality violations. The Genitive Subject intervenes between the attracting C head (or TP - adjoined position in the case of short distance scrambling) and the moving DP. As evidence for the A-bar status of the Genitive Subjects, we present cases from binding and control. As Davison (to appear) convincingly demonstrates, Subjects in Hindi-Urdu are characterized by their ability to (a) A-bind reflexives and (b) control PRO-Subjects (among some other properties). Genitive Subjects, on the other hand, are incapable of doing both, as (ex. 9) and (ex. 10) illustrate. We take these cases to suggest that Genitive Subjects are positioned at A-bar sites from where they fail to bind and control reflexives and PRO respectively.

In the end, an interesting result of this study is that it presents evidence for ‘invisible structure’ in sluicing structures. Minimality violations in sluicing is suggestive of the fact that clause structures containing Genitive Subjects are present in narrow syntax, which are later deleted at PF. Our data is therefore incompatible with Culicover and Jackendoff’s ‘WYSWYG’ (What You See is What You Get) approach to sluicing.

Data
(1) Geetaa-ki, Ravii-ne [ __ Mohan-ko dii hui kitaab] phaar dii (par Salmaa-kii nahii)
   Geeta-gen Ravi-erg Mohan-dat given book tore gave but Salma-gen neg
   ‘Ravi tore up the book that Gita gave to Mohan (but not the one that Salma gave to
   Mohan’)

(2) ?Raam-ke, Salmaa [ __ Sitaa-se milne par] bahut naaraz hogii
   Ram-gen Salma-nom Sita-with meet-inf upon very angry become-fut
   ‘Salma will become very angry upon RAM’s meeting with Sita’

(3) *Mohan-ko, Ravii-ne [Geeta-ki __ dii hui kitaab] phaar dii
   Mohan-dat Ravi-erg Geeta-gen given book tore gave
   ‘Ravi tore up the book that Geeta gave to MOHAN’

(4) *mE jaantaa hu ki Ravii-ne [Salmaa-ki ek larke-ko dii hui kitaab] phaar dii
   I know be that Ravi-erg Salma-gen a boy-dat given book tore gave
   par mujhe nahii pataa (ki) kis-ko
   but I-dat neg know (that) who-dat
   ‘I know that Ravi tore the book that Salma gave to a boy but I don’t know who.’

(5) *mE jaantaa hu ki Ravii-ne [do din pahle Johnko Salmaa-ki __ dii hui kitaab]
   I know be that Ravi-erg two days ago John-dat. Salma-gen give be book
   phaar dii
tore gave
   ‘I know that Ravi tore up the book that Salma gave to John two days ago’

(6) Sueko me jaantii hu [Johnke betene __ kitaab di he]
   Sue-dat. I know be John-gen son-erg book give be
   ‘I know that John’s son gave a book to SUE’

(7) me jaantii hu [ki Johnke betene kisiko kitaab dii], par pataa nahii kisko.
   I know be that John-gen. son-erg. someone-dat. book give, but know not who-dat
   ‘I know that John’s son gave a book to someone, but I don’t know to whom’

(8) me [yeh baat ki John kisiko pyaar kartaa he] jaantii hu,
   I [this fact that John-nom someone-acc loves do be] know be,
   par pataa nahii kisko.
   but don’t know who-acc
   ‘I know the fact that John loves someone, but I don’t know who’

(9) *mujhe [Gitaaki, mohanko apnii, kitaab denaa] pasand nahii aayaa.
   I-dat Gita-gen Mohan-dat. self’s book give like not come
   ‘I did not appreciate Gita giving her book to Mohan’

     I-dat Gita-gen go-away want like not come
     ‘I did not appreciate that Gita wanted to leave’

Lexical frequency and variation

The problem. Variable phonological processes are influenced by the same grammatical factors as categorical processes. In English, t/d variably deletes from word-final clusters – cf. (1). Table 1 (next page) shows that the frequency of deletion is at least partially determined by phonological context. Several formal models have been developed over the past decade or so that can account fairly well for this grammatical influence on variable processes (Anttila 1997; Boersma & Hayes 2001; Coetzee 2006; etc.).

(1)  
<table>
<thead>
<tr>
<th>Pre-C context</th>
<th>Pre-V context</th>
<th>Pre-Pause context</th>
</tr>
</thead>
<tbody>
<tr>
<td>west bank ~ wes bank</td>
<td>west end ~ wes end</td>
<td>west ~ wes</td>
</tr>
</tbody>
</table>

However, usage frequency also influences the application frequency of a variable process. t/d-deletion is more likely in more frequent words – west and vest are very similar, but west is more likely to undergo t/d-deletion, corresponding to its higher usage frequency (Table 2). Current models of variation are all strictly grammatical, and cannot account for this frequency influence. I propose a model that allows grammar and lexical frequency to co-determine the application frequency of a variable process.

The proposal. (i) Variable lexical indexation. I assume that faithfulness constraints can be indexed to lexical classes, and that these constraints are interspersed between the markedness constraints, as shown in (2). An indexed constraint only evaluates words that share its indexation. The novel proposal here is that words do not have to belong to one lexical class exclusively. Since a word can vary its affiliation, it can be evaluated by different indexed constraints on different occasions, resulting in variation. Assume that /west/ can be assigned to L1, L2, L3, or L4. The faithful candidate of /west bank/ violates *PRE-C, and the deletioncandidate one of the indexed MAX-constraints, depending on /west/’s lexical class affiliation. If it is assigned to L1, the faithful candidate is optimal, but any other indexation results in deletion. Pre-vocally (/west end/), the faithful candidate violates *PRE-V. Now two indexations result in preservation (L1, L2), and two in deletion (L3, L4) (cf. tableau below). Pre-pausally only an L4-affiliation results in deletion. The grammatical influence on variation is hence captured – deletion is observed under 3/4 indexations pre-consonantly, 2/4 pre-vocally, and only 1/4 pre-pausally.

(ii) Frequency and lexical class affiliation. In the current model, the lexical class of a word is determined at each evaluation occasion. I propose that this process is influenced by the word’s usage frequency. Every word is stored with its own probability distribution function. These functions range from 0 to 1, with the range divided into regions corresponding to the lexical classes. In the example here, values from 0 to .25 correspond to L1, .25 to .5 to L2, etc. Every time a word is submitted to the grammar, a value is chosen randomly from its probability distribution to determine its lexical class affiliation for that evaluation occasion. If a value under .25 is selected it will be evaluated by MAX-L1, etc.

The shape of a word’s distribution function is determined by its frequency. Frequent words have left-skewed distributions so that their distribution mass is concentrated at the higher end. A frequent word will hence more likely select a value resulting in it being classified as L3 or L4 than L1 or L2. Consequently, a frequent word is more likely to be protected by low ranking faithfulness, and hence to undergo deletion. Infrequent words have right-skewed distributions. By similar reasoning, they are more likely to be assigned to L1 or L2, and hence to resist deletion (cf. figure below). Since usage frequency determines the shape of the distribution functions, lexical frequency gets to influence the likelihood of deletion.

Conclusions. There is mounting evidence that lexical factors (usage frequency) play a role in phonology. An adequate model of phonology must include a mechanism through which such lexical factors can contribute to phonological performance. Lexically indexed constraints allow lexical information an indirect entrance into the grammar, which I exploit here to allow grammar and the lexicon to co-determine the frequency with which variable processes apply.
Table 1: t/d-deletion in Chicano English (Santa Ana 1991:76)

<table>
<thead>
<tr>
<th></th>
<th>Pre-C</th>
<th>Pre-V</th>
<th>Pre-Pause</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>3,693</td>
<td>1,574</td>
<td>1,024</td>
</tr>
<tr>
<td>% deleted</td>
<td>62</td>
<td>45</td>
<td>37</td>
</tr>
</tbody>
</table>

Table 2: Influence of usage frequency on t/d-deletion in Chicano English (Bybee 2000:70)

<table>
<thead>
<tr>
<th>Frequency per million</th>
<th>Deletion</th>
<th>Retention</th>
<th>% Deletion</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 35</td>
<td>898</td>
<td>752</td>
<td>54.4%</td>
</tr>
<tr>
<td>&lt; 35</td>
<td>137</td>
<td>262</td>
<td>34.4%</td>
</tr>
</tbody>
</table>

Lexical distribution functions and lexical frequency

![Graph of lexical distribution functions and lexical frequency]

Evaluated by: MAX-L1, MAX-L2, MAX-L3, MAX-L4

Example derivations in Pre-V context

<table>
<thead>
<tr>
<th>/west+t end/</th>
<th>west end</th>
<th>*PRE-C</th>
<th>MAX-L2</th>
<th>*PRE-V</th>
<th>MAX-L3</th>
<th>*PRE-##</th>
<th>MAX-L4</th>
</tr>
</thead>
<tbody>
<tr>
<td>/west/t end/</td>
<td>wes end</td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/west-t end/</td>
<td>*west end</td>
<td></td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/west-t end/</td>
<td>wes end</td>
<td>*!</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/west+t end/</td>
<td>*west end</td>
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<td>*</td>
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</tr>
</tbody>
</table>

References


In this paper I present new data from possessive phrases in Chol Mayan and discuss the problem they present for current analyses of pied-piping. I argue that a theory of pied-piping in which features from a wh-word ‘percolate’ up to a higher maximal projection is unable to account for certain ordering facts found in interrogative possessive constructions in Chol and other Mayan languages. I will show that on such an approach certain derivations yield a ‘feature percolation paradox’: percolation that is obligatory at one stage in the derivation must be blocked at another.

I adopt instead an analysis along the lines of Cable (2006, 2007), in which feature percolation and pied-piping are eliminated from the grammar, and wh-movement to Spec,CP is always the result of a relationship between the C head and a projection dominating the wh-word, ‘QP’. While Cable presents a number of conceptual and empirical reasons to prefer a QP analysis over pied-piping, I argue that for the Chol data a QP-raising account is not only preferable, but necessary. I propose further that the apparent free choice in Chol between possessor extraction and so-called pied-piping constructions can be explained as a consequence of where in the derivation the Q head is merged, rather than as optional movement.

Chol data: In Chol, non-interrogative possessors must follow the possessed noun, as shown in (1). The possessed noun shows agreement with the possessor in the form of an ergative/genitive prefix (‘E’). In Chol, all wh-words must front to Spec,CP; a wh-word left in situ is ungrammatical. In the case of wh-possessors, there are two possibilities for fronting: either the wh-possessor extracts out of the possessive phrase and fronts alone, as in (2a), or it ‘pied-pipes’ the possessum, as in (2b). Note that while non-wh-possessors obligatorily follow the possessum, as in (1a), wh-possessors inside a fronted possessive phrase must precede the possessum. Following Aissen (1996), this is argued to be the result of fronting to Spec,DP within the possessive phrase. This initial data presents no obvious problems for a pied-piping analysis: In (2a) the wh-possessor, maxki, raises to Spec,DP within the possessive phrase, a position from which it may extract. Its features do not percolate, and it fronts alone to Spec,CP. In (2b) maxki again fronts to Spec,DP, this time its features do percolate, and the entire DP is fronted to Spec,CP.

The problem arises, however, in the case of complex possessive phrases. In Chol, possession may be recursive, as in (3). There are three distinct possibilities for questioning the possessor in (3), shown in (4). Either maxki extracts alone (4a), the intermediate possessor fronts (4b), or the entire complex possessive phrase fronts, (4c). The problem arises in the order of elements within the fronted possessive phrases. In (4c) the wh-possessor maxki appears at the left-most edge of the possessive phrase, but the other two elements remain in their base order from (3). If we make the standard assumption that only wh-words are targeted for wh-movement, then standard analyses of pied-piping require us to say that in order for the larger possessive phrase, DP1, to be selected for movement to Spec,CP, the Q features of the wh-word must ‘percolate’ up to DP1. However, in order to achieve the correct order in (4c), feature percolation must not occur from maxki to DP2. If it did, we would see the ‘roll-up’ order in (5), judged to be unequivocally ungrammatical. In order to achieve the correct surface order for (4b) and (4c), we are forced to say that the interrogative DP maxki both does and does not percolate features at different steps in the derivation. For the extraction case in (4a), on the other hand, feature percolation must not take place at all. Consistent percolation results in ungrammaticality. Stipulating that feature percolation may occur at most once, still does not explain why it is allowed to happen late in the derivation, or to simply not take place at all.

Analysis: I argue instead for an analysis following Cable (2006, 2007) in which wh-movement targets a question phrase, QP. I show that this analysis correctly captures the ordering facts in Chol, and has the added benefit of explaining the optionality between forms in (4) as merely a consequence of where in the derivation the Q head merges. This reduces the apparently optional and otherwise problematic operation of feature percolation to a simple structural difference. Specifically, the Q head may merge with DP1, DP2, or DP3, resulting in the sentences in (4c), (4b), and (4a), respectively. I propose that each D head in a Chol interrogative possessive phrase contains a strong Q feature (parallel to Q features in the C head in the clausal domain). This strong Q feature must be checked in one of two ways: either by attracting a [+Q]
wh-word to its specifier, or by attracting a QP. By assuming that all movement obeys locality, I will show 
that under this analysis we immediately achieve the correct surface order for all forms.

Examples:

(1) a. Tyi puli [i-yotyoty Maria].
   PERF burn 3E-house Maria
   ‘Maria’s house burned.’

   *Tyi puli [Maria i-yotyoty].
   PERF burn Maria 3E’house
   ‘Maria’s house burned.’

(2) a. Maxki tyi puli [i-yotyoty t]? 
   WHO PERF burn 3E-house
   ‘Whose house burned?’

   b. [Maxki i-yotyoty], tyi puli t? 
   WHO 3E-house PERF burn
   ‘Whose house burned?’

(3) Tyi puli DP[i-jol DP2[i-yotyoty DP3[Maria]]].
   PERF burn 3E-roof 3E-house Maria
   ‘Maria’s house’s roof burned.’

(4) a. Maxkii tyi puli [i-jol i-yotyoty t]? 
   WHO PERF burn 3E-roof 3E-house
   ‘Whose house’s roof burned?’

   b. [Maxki i-chich], tyi chami [i-wakax t]? 
   WHO 3E-sister PERF die 3E-cow
   ‘Whose sister’s cow died?’

   c. [Maxki i-jol i-yotyoty], tyi puli t? 
   WHO 3E-roof 3E-house PERF burn
   ‘Whose house’s roof burned?’

(5) * [Maxki i-yotyoty i-jol], tyi puli t? 
   WHO 3E-house 3E-roof PERF burn
   ‘Whose house’s roof burned?’

References:
Cable, Seth. 2006. Q-particles and the nature of wh-fronting. Ms., MIT.

1 Lexical items have been changed in this example, as there is a separate restriction that inalienably possessed nouns 
may not be separated from their possessor.
Cooccurrence restrictions, Similarity, and Correspondence in Chol (Mayan)

In this paper we examine the implications of previously undiscussed data from Chol (Mayan) for the analysis of consonant cooccurrence restrictions and other non-local consonant interactions. We argue for an analysis of the identity effect, where identical segments are permitted to cooccur but certain similar segments are not, within the AGREEMENT BY CORRESPONDENCE (ABC) theory of Rose & Walker (2004) (R&W). Our analysis improves on proposals in R&W and Hansson (2001) in two ways. First, we argue that the constraints demanding correspondence between output segments, CORR-CC, must refer to the similarity of two consonants, computed from a language specific similarity metric, and not to individual feature values. This step is necessary to account for the interaction of cooccurrence restrictions on ejectives and stridents in Chol, a phenomenon that has not been previously noted in the cooccurrence literature. Second, we analyze complete identity between corresponding segments as the result of a total identity constraint, CC-IDENT, and not feature specific identity constraints, CC-IDENT[F], as proposed by R&W and Hansson. Our analysis is an improvement over the OCP-based analysis of the identity effect in MacEachern (1999) in making explicit formal reference to a notion of similarity.

Chol facts: As in many languages, certain consonants in Chol are prohibited from cooccurring in a root. Unlike many of the languages analyzed in the literature, Chol shows multiple interacting restrictions. Chol’s consonant inventory contains 5 ejective stops, and 6 stridents, shown in (1). Pairs of ejectives and pairs of plain stridents are prohibited from cooccurring unless they are identical, (2). Interestingly, in Chol, the identity condition on stridents does not hold if one of the stridents is ejective, (3). However, while an ejective and a non-ejective strident may disagree for stricture, [ɑCONTINUANT], they still must agree for [ɑANTERIOR]. An analysis of the data in (2) and (3) must account for three things: 1. why identical segments may cooccur but similar segments may not, 2. why ejective licenses the cooccurrence of non-identical stridents, and 3. why anteriority harmony applies in the absence of complete identity.

Analysis: We argue that the correct analysis of the pattern in (2) is dependent on a notion of similarity. Similar consonants (ejectives and stridents) may not cooccur, but identical consonants may. Ejectivity licenses the cooccurrence of non-identical stridents because it renders these two segments adequately dissimilar. The proposal in this paper provides an explicit formalization of ideas in MacEachern, Hansson, and R&W that cooccurrence restrictions and harmonies target segments that are similar.

To formalize these ideas we develop a similarity metric for Chol. We argue that certain acoustically salient features, such as ejective and stridency, must contribute more to the computation of similarity than others, following Tversky (1977). In addition to the strident and ejective facts, our weighted similarity metric also correctly models gradient effects found in the Chol lexicon. We compute observed/expected (O/E) ratios for all pairs of consonants and show that while consonants which share place of articulation are unattested, they are underrepresented in the grammar. Our similarity metric correctly models this. We achieve an inverse correlation between similarity and cooccurrence: the more similar a pair of consonants, the less likely they are to cooccur.

Next, we develop an ABC analysis of cooccurrence restrictions based on this similarity metric. We propose that CORR-CC, the constraint that demands correspondence between output segments, must refer to the similarity score of a pair of consonants, (4). Consonants with a similarity score above a certain threshold must correspond. This accounts for the fact that two plain stridents must correspond, but an ejective and a plain strident must not, a fact that cannot be explained if CORR-CC refers only to features. Specifically, Corr-CC[strident] would demand correspondence both between plain stridents and ejective and non-ejective stridents, thus falsely predicting the mapping in (5a) instead of (5b). The complete identity effect in Chol is analyzed as the effect of a general, total identity constraint CC-IDENT.
(1) a. Chol ejectives: [p'], [ʦ'], [ʧ'], [tʃ'], [k']
b. Chol stridents: [s], [ʦ], [ʦ'], [ʧ], [ʧ'], [ʧ']

(2) a. Ejectives may not cooccur unless they are identical:
   *k’ap’ √ k’ak’
   *ʦ’at’ √ tʃ’at’
   *p’at’ √ p’ap’

   b. Plain stridents may not cooccur unless they are identical:
      *saʃ’ √ sas
      *ʦas √ tsats
      *ʃats √ fas

(3) √ tʃ’as ∗ tʃ’aʃ’
   √ fas’ ∗ saʃ’

(4) CORR-C⇒C (∑{C_i—C_j} > n): Let S be an output string of segments and ∑{C_i—C_j} be the similarity of C_i and C_j. If consonants C_i, C_j ∈ S, and ∑{C_i—C_j} > n, then C_i and C_j are in correspondence.

(5) a: /ʦ’as/ → [ʦ’,ats’_x] bad prediction of CORR-CC[STRIDENT]
b: /ʦ’as/ → [ʦ’,as_y] correct prediction of CORR-CC(∑ > n)

References
Proper subset relation and Concord: agreement in Abruzzese possessive copular constructions
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Since Chomsky (2000), syntactic agreement has been conceived as a relation between a Probe (a phase-head, according to Chomsky 2005) with unvalued features and a Goal with valued ones. Agree leads to the valuation of unvalued features, which are then deleted at Spell-Out, when the interface with other systems is reached. In this paper, we wish to show that this Agree operation cannot account for all cases of feature valuation. We present a set of novel data on copular possessive constructions from two variants of Eastern Abruzzese (EA), a southern Italian dialect, which display peculiar agreement patterns. The EA data corroborate the hypothesis already discussed in the literature that adjectival/predicative agreement needs to be expressed in terms of Concord (Uriagereka 1999, Carstens 2000, Di Sciullo 2005), while providing compelling evidence for the existence of feature hierarchy sensitivity for agreement in these varieties.

Copular possessive constructions in EA are quite striking. In both variants of EA, Ariellese (AR) and Fallese (FA), a definite determiner must precede the possessive pronoun, and only in AR, the complex possessive pronoun can be preceded by a preposition. The constructs lack both the preposition and the definite determiner in Italian (1). However, despite both variants of EA have a fully-fledged morphological system, with number and gender endings for determiners and possessives, these endings are not selected in copular possessive constructions. Instead, AR only displays number agreement between the possessive PP (or DP) and the DP it modifies, whereas FA displays gender and number agreement between the same elements, but only gender marking on the possessive, (2).

Let us consider the sentences in (2a)-(2b): in (2a) both the determiner in the possessive phrase is masculine singular in AR. This is rather unexpected, given that AR does have the feminine singular form for the possessive (in the same sentence, la). This means that the possessive phrase agrees with the main DP only in number, and gender is somehow disregarded. This is not the case in FA, where the possessive phrase agrees with the DP in gender and in number (2b). Observe furthermore that these constructions are not partitive ones, as shown in (3). If we wish to resolve this agreement pattern in terms of Agree, we immediately run into trouble, given that we cannot identify the Probe nor do features get deleted after valuation. Therefore, we assume that agreement in these constructions obtains by means of Concord (4).

We are now left with the problem of ‘partial’ agreement between the possessive DP and the main DP in AR. We argue that the reason for this is that Concord in copular possessive constructions establishes a subset relation between the sets of phi-features. In AR, this subset relation selects only the most prominent feature (in a given language - languages differ with respect to which feature is more prominent) in the possessive phrase, leaving the other features unaddressed. The subset relation stems from a previous partitive relation from which this construction originates (see Ledgeway 1995 for similar facts in Neapolitan), and is now transferred from sets of items to sets of features. In AR, the features are organised such that number pre-empts gender agreement on adjectives/determiners. When two DPs are merged in a possessive copular construction, a small clause is formed. Then, Concord takes place between the phi-complete main DP and a subset of the phi-features on the possessive DP, specifically the most prominent feature. Therefore, in AR only number gets valued through Concord. The unvalued gender feature left is assigned default agreement.

This analysis has interesting implications: first, it offers further evidence for the relevance of proper subset relation in agreement contexts, already independently argued for movement and constraints on sub-extractions (Di Sciullo and Isaac 2007). Second, if Concord were a matching relation between individual features, the microvariation in EA facts could not be provided a unified account. Therefore, the EA data show that Concord is a relation between sets of features arranged in a particular configuration. Then, if features are organised in a hierarchical fashion in these languages, we expect to see this instantiated in other agreement contexts for the same languages. This prediction is in fact borne out, as the data on past participle agreement and auxiliary selection in EA show (see D’Alessandro & Roberts 2006).
Examples

(1)  
a.  La case jè (di) lu me (AR)  
the-fem sg house-fem sg is of the masc sg my-sg  
b.  La case è la mè (FA)  
the-fem sg house-fem sg is the-fem sg my-fem  
c.  La casa è la mia (IT)  
the-fem sg house-fem sh is the-fem sg my-fem sg  
'The house is mine’

(2)  
a.  La case jè (di) lu me  La case è la mè  
the-fsg house-fsg is of the-msg my-sg the-fsg house-fsg is the-fsg my-f  
b.  Li case jè (di) li mi  Li case è li mè  
the-pl houses-fpl are of the-pl my-pl the-pl houses-fsg is the-pl my-f  
c.  Lu cane jè (di) lu me  Lu cane è lu miè  
the-msg dog-msg is of the-msg my-sg the-msg dog-msg is the-msg my-m  
d.  Li chiene jè (di) li mi  Li chiene è li miè  
the-pl dogs-mpl are of the-pl my-pl the-pl dogs-mpl are the-pl my-m

(3)  
a.  Na/ *la machine di li mi [PART] (AR)  
a-fsg the-fsg car-fsg of the-pl my-pl  
b.  La machine jè di lu me [POSS] (AR)  
the-fsg car-fsg is of the-msg my-sg  
c.  Na/ *la machina mè [PART] (FA)  
a-fsg the-fsg car-fsg my-f  
d.  La machine è la mè [POSS] (FA)  
the-fsg car-fsg is the-fsg my-f

(4) a. Agree-check is a matching relation under which feature checking takes place. Agree-concord is a matching relation under which no feature checking takes place.  
b. Agree as a proper subset relation:  
Agree ($\phi_1$, $\phi_2$): Given two sets of features $\phi_1$ and $\phi_2$, Agree holds between $\phi_1$ and $\phi_2$, iff $\phi_1$ properly includes $\phi_2$. (Di Sciullo 2005)

Selected references
When is a pronoun not a pronoun? The case of resumptives.
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Overview. On one conception of the syntax-semantics interface, binders enter syntactic structures only via movement (in the manner of Heim and Kratzer 1998). Resumptive constructions involve variable binding, and so given this view they ought to involve movement. This conclusion is controversial, but we argue that it is correct: it allows for a neat account of an intricate set of data from Jordanian Arabic (JA) involving epithets and pronouns. Our paper thus supports this conception of the syntax-semantics interface. Crucial to our account, however, is a further claim about the interface: not all parts of an LF have to be interpreted. In particular, we claim that variables can go uninterpreted. This can be seen as a kind of repair strategy that occurs in cases of type mismatch.

Proposal: resumptive pronouns are uninterpreted pronouns. We claim that when pronouns serve as resumptives, like uh in (1a), they are simply uninterpreted. At LF, they raise (as proposed by Demirdache 1991), leaving behind a binder and a trace (a variable). This is how the relative clause in (1a) comes to denote a predicate of individuals who you thought that Layla loves ((1b)). Resumptives constitute just one example of uninterpreted pronouns. Percus and Sauerland 2003 argued that we find them in “de se” dream reports, and the same idea is plausible elsewhere, e.g., pronouns inside the complement of have or in the believe of construction. (Assuming that have selects for a relation in John has a daughter, we would also want to get a relation out of have’s complement in John has a person he can rely on. Given that a is semantically empty, we can do this if he goes uninterpreted and raises to the edge of have’s complement. Similarly, in Mary believes of John that lightning struck him, we would arguably like to get a property out of that lightning struck him.)

Preliminaries: epithets. JA epithets are made up of a pronominal element ha and an expressive term like l-Hmar (“the donkey”) in (2). While there is nothing wrong with a bound variable epithet ((3)), quantificational structures like (4) with a “resumptive epithet” are ungrammatical -- surprisingly, since sentences where the quantifier is replaced by a referential expression are fine ((5)). We claim that the expressive selects semantically for an individual ((6)) but is excluded from attaching to a trace, ruling out an otherwise interpretable LF for (4) (see the LFs in (7)). Why is (5) good? At LF, the expressive can float away from its host pronoun and combine with the pronoun’s “antecedent” (the DP whose phi-features determine the resumptive’s phi-features). This saves (5) (see (7) again), but is of no help for (4): the result there would be uninterpretable, for the expressive’s sister wouldn’t be an individual.

Pronouns and epithets. In quantificational resumptive sentences with a clitic pronoun and an epithet, the clitic pronoun can precede the epithet ((8a)) but not vice versa ((9a)). Our proposal predicts this straightforwardly. There is a derivation for (8a) involving movement of the leftmost pronoun ((8b)), but the parallel derivation for (9a) would violate the ban on expressives attaching to traces, and movement of the rightmost pronoun would constitute crossover ((9b)). We also correctly predict acceptability when we replace the quantifier with a referential expression: the expressive can attach to the referential expression, and then the leftmost pronoun is free to move. If our diagnosis of these facts is correct, then resumptive pronouns yield weak crossover effects, a claim by Demirdache 1991 rejected by Aoun et al 2000 on the grounds that it did not take into account the resumptive use of epithets. Our proposal integrates a treatment of epithets, accounting for the full range of data.

A twist: islands. We neglected thus far an exception to the pattern in quantificational sentences: epithets in clausal islands can “behave resumptively” and do not “block” later cobound pronouns ((10)). The natural conclusion is that, in such cases, something to the left of the epithet must be moving, not the epithet’s pronoun itself. We suggest (adapting latridou 1991) that the left periphery of these clauses can host a null operator, which (like a relative pronoun) has no interpretation on its own. In sentences such as (10), it moves, leaves a binder and a trace, and then the trace goes uninterpreted - - as can happen with variables ((11)). The covert movement of resumptive pronouns might generally respect constraints on long distance movement, then, contrary to initial appearances.

Closing reflections. We accounted here for a range of contrasts assuming that binders can only be left by movement, and that pronouns can go uninterpreted and move at LF. How would a competing account fare on which, say, binders can be freely inserted and resumptive pronouns are simple variables remaining in situ ((12))? This competing account would need to derive the following complex condition on epithets: An epithet in the environment of a quantifier can only be bound by an inserted binder if a cobound variable or an island intervenes between the two. We do not see how this can be done in a principled way.

Teaser. Our discussion will touch on some suggestive parallels between JA and English with respect to the behavior of resumptive pronouns and epithets.
a. kull walad illi fakartu ?innu Layla bitHibb-uh ...
  every boy that you.thought that Layla loves-him
  “every boy that you thought that Layla loves him”

b. LF of the relative clause in (1a):  [ (him₁) 2 you thought that Layla loves t₂ ]
  (Parentheses around the pronoun indicate that the pronoun goes uninterpreted.)

(2) a. ha l-Hmar “the donkey”  b. Structure: [ ha₁ [ l-Hmar]]
(3) kull walad illi ?umm-oh fakkart ha-l-Hmar bi-l-bajat ...
  every boy that his mother thought pro-the-donkey at-the-house
  “every boy that his mother thought that this donkey is at home”

(4) a. *kull walad illi fakartu ?innu ha-l-Hmar bi-l-bajat ...
  every boy that you.thought that pro-the-donkey at-the-house
  “every boy that you thought that this donkey is at home”

b. *kull walad, fakartu ?innu ha-l-Hmar bi-l-bajat
  every boy, you.thought that pro-the-donkey at-the-house
  “Every boy, you thought that this donkey is at home.”

(5) a. el-walad illi fakartu ?innu ha-l-Hmar bi-l-bajat ...
  the-boy that you.thought that pro-the-donkey at-the-house
  “the boy that you thought that this donkey is at home”

b. xaled, fakartu ?innu ha-l-Hmar bi-l-bajat
  xaled, you.thought that pro-the-donkey at-the-house
  “Xaled, you thought that this donkey is at home.”

(6) Epithets: Semantic assumptions (inspired by Potts 2006):
  a. l-Hmar selects semantically for an individual.
  b. [ X l-Hmar ] contributes to the common ground the information that the speaker doesn’t think highly of the individual in question (a simplification -- we will discuss what happens when X is a bound variable)
  c. [[ X l-Hmar ]]² = [[ X ]]²

(7) LFs: (3):
  [DP every boy [ (his₁) 2 t₂ mother thought that [ha₂ the-d.] is at home ] ] ...
  (4a): * [DP every boy [ (ha₁) 2 you thought that [t₂ the-d.] is at home ] ] ...
     ( * [t expressive] )
  (4b): * [DP Every boy [ (ha₁) 2 you thought that [t₂ the-d.] is at home ] ]
     ( * [t expressive] )
  (5a): [ [DP the boy [ (ha₁) 2 you thought that [t₂ -- ] is at home] ] the-d. ] ... ( Epithet float )
  (5b): [ [DP Xaled] the-d. ] [ (ha₁) 2 you thought that [t₂ -- ] is at home ] ] ( Epithet float )

(8) a. kull walad illi ?umm-oh fakkart ?innu raH yzittu ha-l-Hmar bi-lHabs ...
  every-boy that mother-his thought that they.will put pro-the-donkey in-prison
  “every boy that his mother thought that they will put this donkey in prison”

b. # kull walad illi ?um ha–l-Hmar fakkart ?innu raH yzittu-u bi-lHabs ...
  every-boy that mother-pro-the-donkey thought that they.will put-him in-prison
  “every boy that this donkey’s mother thought that they will put him in prison”

(9) a. # kull walad illi ?um ha–l-Hmar fakkart ?innu raH yzittu-u bi-lHabs ...
  every-boy that mother-pro-the-donkey thought that they.will put-him in-prison
  “every boy that this donkey’s mother thought that they will put him in prison”

b. LFs for the relative clause that would yield the desired interpretation:
  * [ (ha₁) 2 [ t₂ the-d.]’s mother thought that they will put him₁ in prison ]
    ( * [t expressive] )
  * [ (him₁) 2 [ ha₁ the-d.]’s mother thought that they will put t₂ in prison ]
    ( * crossover )

(10) a. kull walad illi zqiltu li ?annu Mona darbat ha–l-Hmar ...
  every boy that I got angry because Mona hit pro-the-donkey
  “every boy that I got angry because Mona hit this donkey”

b. every boy, zqiltu li?annu ?um ha–l-Hmar darbat-uh
  every boy I got angry because mother-pro-the-donkey hit-him
  “Every boy, I got angry because this donkey’s mother hit him₁’”

(11) LF of (10b):  ... [ Ø [ 1 I got angry [ (t₁) ] ] because [ ha₁ the-d.]’s mother hit him₁ ] ] ]

(12) LF of the relative clause in (1a) on a competing analysis involving free insertion of binders:
  [ 2 you thought that Layla loves him₂ ] ( 2 inserted, without any movement above it )
We want to explain the availability and non-availability of (exceptional wide) intermediate scope readings (ISRs) as illustrated in (1). (1a) is only two-way ambiguous. It allows for a specific and an unspecific interpretation of the indefinite, i.e. an (apparent) exceptional wide (= islandfree) scope reading of the indefinite and a narrow scope reading. It does, however, not allow for an ISR, where the indefinite takes scope over the $If$-clause, but below the universal quantifier. (1b), on the other hand, with the bound pronoun does allow for such an ISR. (1c), where no overt bound pronoun is involved, allows for an ISR, too. The question is: why is it that ISRs are sometimes available and sometimes not?

To our knowledge, three (types of) suggestions towards an explanation as for why ISRs are not always available have been made so far. According to the first one, ISRs are only possible with (overtly realized or implicit) bound pronouns, i.e. these approaches assume it is the bound pronoun in examples like (1b) that makes available ISRs (see Kratzer, 1998; Matthewson, 1999; Schwarzschild, 2002 and many others) - hence the contrast with (1a). According to the second type of approach, ISRs are in principle always available, but they are sometimes ruled out for pragmatic reasons (see Reinhart, 1997; Winter, 1997). However, in (2), this cannot be the case, as the ISR would be the only plausible one. Yet, it is not available. Finally, Kratzer (1998) distinguishes between genuine ISRs and apparent functional wide scope ones (cf. also Schwarz, 2001), where it is shown that genuine ISRs are indeed truthconditionally differentiable from (apparent) functionally dependent wide scope readings). In Kratzer’s view, functional wide scope readings only evolve if functional elements (e.g. bound pronouns) are present or can plausibly be accommodated. Genuine ISRs, in contrast, constitute de re readings in the context of attitude verbs.

Our own proposal treats ISRs as embedded speech acts, i.e. we propose that ISRs exclusively evolve in the presence of topic-comment structure embedding (= speech act embedding) operators (see e.g. Krifka, 2001 for the claim that speech acts also appear embedded). Our approach then explains why (1c) supports an ISR, namely because it contains the speech act verb suspect, and why (1a) does not: precisely because it does not contain such a verb. However, we will not be concerned with readings as in (1b), which we take to lack an ISR, although this is somewhat disguised as it supports a functional wide scope reading (cf. Ebert & Endriss, 2007). Our approach also directly explains why (3) allows for an ISR much more easily than (2). The decisive difference between (3) and (2) is the presence of the speech act embedding operator report. Consider furthermore the minimal pair in (4): While (4a) contains a speech act embedding operator (promise), (4b) does not. As predicted, (4a) allows for an ISR easily, but (4b) does not. We follow the approach of (Ebert and Endriss, 2004), where indefinites taking exceptional wide scope are shown to be topical. Crucially, the readings that are derived are genuine scope readings. As ISRs are not dealt with there, we propose to modify their original approach so that it can also account for ISRs in the following way: a topical indefinite always takes wide scope with respect to its topic-comment structure embedding operator. We take it that if there is no overt speech act operator the outermost operator embedding the entire sentence in question is an illocutionary operator (e.g. silent Assert). In this case, the indefinite also takes scope over this operator, but is itself embedded in a separate speech act of topic introduction (cf. Searle’s (1969) assumption of a reference act and Jacobs’ (1984) assumption of a frame setting speech act for topics). To illustrate this interpretation scheme, the derivation of the intermediate scope reading of (4a) is given in (5), where the DP some woman is assumed to be the topic of a topic-comment structure $(T, C)$ (cf. Krifka, 1992) that is embedded by the verb promised. Formula (5) correctly represents the intermediate scope reading of (4a). (4b), on the other hand, cannot have such an intermediate scope reading, because the sentence does not contain any topic-comment structure embedding operator such as promised. As a first approximation, we hypothesize that those verbs that allow for embedded verb-second clauses in German can be regarded as speech-act embedded verbs (as such clauses are often described as being 'proto-assertive’). For example, versprechen (to promise), vermuten
(to suspect), or glauben (to believe) allow for verb-second embedded clauses, whereas bedauern (to regret) or mitbekommen (to become aware of) do not. Initial investigations seem to support our prediction that verbs of the first group, which seem to be verbs that are in some sense volitional/intentional, do allow for ISRs (see ex. (1c), (3), (4a)) and verbs of the second group do not. Our hypothesis is furthermore supported by findings of Kuroda (2005) in Japanese. As is known, the wa-morpheme can usually indicate topicality or contrastivity. Kuroda (2005, pp. 19f.) now observes that sentences embedded under verbs of the first group allow for a non-contrastive, i.e. topical, interpretation of the wa-marked constituents, whereas wa-marked constituents under verbs of the second group enforce a contrastive interpretation. We claim that this differentiation is crucial for the availability of ISRs.

Examples

(1) a. If a student in the syntax class cheats on the exam, every professor will be fired. (Fodor and Sag, 1982, p. 375)
   b. Every professor will rejoice if a certain student of his cheats on the exam. (Ruys, 1992, p. 114)
   c. Everyone of them suspected that some (actual) doctor from the hospital was a quack. (Kratzer, 1998, p. 187)

(2) (Last week, I went to a horse-race every day. It was funny:)
   # All horses won all races that took place on one day.

(3) (Last week, I went to a horse-race every day. It was funny:)
   Of all horses it was reported that they had won all races that had taken place on one day.

(4) a. Every student promised to come to the party if some/one woman comes.
   b. Every student will come to the party if some/one woman comes.

(5) Assert(∀x[student(x) → promised[Topic x, ⟨some commented woman, λG come(x) → come⟩⟩]) ⇝
    Assert(∀x[student(x) → ∃y.some commented woman(y) ∧ promised[comment x, (come(y) → come(x))]])

References

Artificial grammar learning experiments can provide valuable data for linguistic theory, particularly when typological data alone has been unable to solve a particular debate. One such area in phonology is whether directionality may be directly encoded in vowel harmony or whether it always follows from morphological structure. Bakovic (2000) argues that directionality in vowel harmony is epiphenomenal; right-to-left harmony is exhibited by prefixing languages, and left-to-right harmony is exhibited by suffixing languages. However, counterexamples to the generalization that morphology predicts directionality (Mahanta 2007, Ribeiro 2002), and the cross-linguistic preference for right-to-left harmony (Hyman 2002) raise doubt as to whether harmony is inherently bi-directional. The present study provides further evidence that directionality plays a role in vowel harmony.

The experiment used the Poverty of the Stimulus Paradigm (Wilson 2006), which tests for generalization to items that have not appeared during training. Participants were trained either on stem+suffix harmony (regressive) or prefix+stem (progressive) harmony. After training, all participants were asked to make grammaticality judgments about both prefixed and suffixed test items. If participants learned an inherently bi-directional harmony system, they should accept both harmonic prefixed and harmonic suffixed forms regardless of their training experience. However, if participants are biased towards right-to-left harmony (Hyman 2002), then participants should only generalize to prefixed items. If participants have no bias towards bi-directionality or right-to-left harmony, they should only extend the harmonic pattern to the morphological structure they were trained on.

Adult native speakers of English were trained on a color (back and round) harmony system in which front, unround vowels [i, e] triggered the prefix/suffix vowel [i] and back, round vowels triggered the prefix/suffix vowel [u]. Participants in each hold-out condition were trained on 24 stem and stem+suffix or stem+prefix alternations (e.g., [buno, bunomu], [pekí, pekimí] for suffixed training, and [buno, mubonu], [pekí, mipeki] for prefixed training). Participants in the control condition were trained on a mixture of harmonic and disharmonic stems (e.g., [bide, piko]), but received identical test items to the other hold-out conditions. Immediately following training, participants were given a forced-choice grammaticality judgment task which containing 36 items. In order to avoid generalization to novel affixes on the basis of similarity to the training affix, the novel affix contained a different consonant as the training affix (e.g., participants trained with suffix [mi-]/[mu-] were given prefix [-gi]/[-gu] and vice versa for each condition). Identity of affix consonant was counterbalanced throughout the experiment.

Results indicate learning of the harmony pattern for both training conditions. Extension of harmony from stem+suffix to prefix+stem was more robust than extension of harmony from prefix+stem to stem+suffix. There were significantly more harmonic responses to Old and New items in the Suffix Generalization condition, but not in the Prefix Generalization condition. This suggests that learners are biased towards the cross-linguistically preferred right-to-left harmony, and that directionality is at least one factor at work in the learning of vowel harmony.
Positive Standards of Comparison
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In this paper I examine a previously unnoticed way in which standards of comparison for gradable adjectives may be expressed, and consider its implications for theories of gradability and comparison. Specifically, I propose that infinitival relative clauses may provide standards of comparison for attributive gradable adjectives in the positive, or unmarked, form (i.e., not in comparative forms with more/-er or less). The provision of a standard is implemented as domain restriction on the gradable predicate from which the relevant standard is computed.

The construction of interest is shown in (1a): a predicative DP containing an attributive adjective with a postnominal infinitival relative clause. I restrict my attention here to those adjectives that do not independently select infinitival complements. (The reader may verify that sentences like those in (1b) do not share many of the properties discussed below; cf. also the contrast in (1c).)

I propose that sentences like (1a) are a subtype of comparative. The infinitival relative clause occupies the syntactic position of the than-clause in an ordinary comparative, and performs the same semantic function: it provides a standard of comparison. The syntactic Degree head is not more/-er or less, but the phonologically null “positive” morpheme pos, discussed immediately below. The syntax of the predicative DP in (1a) is sketched in (2).

The semantics of pos is shown in (3) (Kennedy 2007:17). I follow Kennedy (2007) in treating gradable predicates as measure functions from individuals to degrees (type $\langle e, d \rangle$), with Degree heads like pos specifying a relationship between the degree associated with the subject and a standard value. In (3), the standard value is computed by the function $s$, which returns a relevant standard associated with the gradable predicate under consideration. I propose that the infinitival clause in a sentence like (1a) restricts the domain of the gradable predicate used to compute the standard, as shown in (4). (1a) then means that the degree of length possessed by Middlemarch exceeds the standard of length associated with things one can or should read in one sitting.

Sentences like (1a) are sensitive to the relative/absolute distinction among gradable adjectives discussed by Kennedy (2007). The domain restriction they effect is felicitous only when the gradable predicate “points to” an open end of a scale (Rotstein and Winter 2004; Kennedy and McNally 2005): i.e., when the scale is open at both ends (relative), when a lower-bound scale is used with a positive adjective (absolute), or when an upper-bound scale is used with a negative adjective (absolute) (see (5)). Sentences like (1a), with domain restriction, behave just like the sentences with pos and a relative gradable adjective discussed by Kennedy (2007). They require that the degree associated with the subject exceed the relevant standard by some significant or noteworthy amount (Fara 2000), i.e., they do not allow “crisp judgments” (6). These requirements cannot be met when the adjective points to the closed end of a scale. The analysis proposed here thus offers new evidence in support of Kennedy and McNally’s typology of scales, as well as for the interpretive properties of pos identified by Kennedy (2007).

The positive-comparative analysis has a number of additional advantages: (i) It explains why overt comparative morphemes may not occur in sentences like (1a). A single sentence may not contain two Degree heads, and the infinitival phrase and the than-clause may not compete for the same syntactic position (see (7a)). (ii) It explains why (1a) cannot contain an overt measure phrase, as in (7b), and why the measured amount may not be questioned, as in (7c). Both the measure phrase and the infinitival provide a standard of comparison (how questions the standard), and thus may not cooccur. (iii) It explains why only gradable predicates may occur in this construction (see (7d)). Following Kennedy (2007), I assume that pos (like the comparative heads) is compatible only with gradable adjectives.

Thus, the positive-comparative analysis of (1a) accounts directly for many of its syntactic and semantic properties, properties that have not been extensively examined before.
(1) a. *Middlemarch* is a long book to read in one sitting.
   b. *Middlemarch* is a tough book to read in one sitting.
   c. It is tough/*long to read *Middlemarch* in one sitting.

(2)

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(3) \[ \text{POS} = \lambda g \lambda x. g(x) \geq s(g), \text{where } g \text{ is a gradable predicate of type } \langle e, d \rangle \]

(4) a. \( F = \lambda x. \text{read-in-one-sitting}'(x)(z) \)
   where \( z \) is a free variable of type \( e \) representing the PRO subject
   b. \( \left[(1a)\right] = \text{long}'(\text{Middlemarch}) \geq s(\lambda x : F(x).\text{long}'(x)) \)

(5) a. *Open at both ends (relative):* long/short
   That is a long/short book to assign for summer reading.
   b. *Lower bound (absolute):* dirty(pos.)/clean(neg.)
   Those are some dirty/*clean pants to wear to your in-laws’.
   c. *Upper bound (absolute):* certain(pos.)/uncertain(neg.)
   That’s a *certain/uncertain outcome to depend on.

(6) # *Middlemarch* is a long book to assign, but a book one page shorter wouldn’t be.

(7) a. *Middlemarch* is a longer book to read in one sitting than *Emma*.
   b. *Middlemarch* is a 700-page long book to read in one sitting.
   c. *How long (of) a book is *Middlemarch* to read in one sitting?
   d. *Middlemarch* is an English novel to read in one sitting.

References

The question. I will present an experimental study conducted with Italian adults concerning the interpretation of pronouns in donkey sentences. Consider the standard example in (1). As is well known from the literature, the pronoun *it* in (1) admits of two interpretations, the universal (\(\forall\)) and the existential (\(\exists\)) one, interpretations whose truth conditional import can be represented as in (2) and (3) respectively. Our concern here is to experimentally test an interesting generalization regarding the distribution of \(\forall\)- and \(\exists\)-interpretations, put forth in Kanazawa (1994): the preferred interpretation of donkey pronouns is the one that preserves the left monotonicity properties of the determiner, on the lines provided in (4). While there has been some experimental work on how donkey pronouns are interpreted (cf., e.g. Geurts, 2002 and Yoon, 1996), no work has tried to experimentally probe Kanazawa’s claim. Yet, if empirically supported, such a claim would be important, as it would show that the semantic processor must have access to an abstract formal property of an unprecedented kind, namely, monotonicity preservation in non C-command anaphora.

The experimental study: Material. We carried out a reaction-time study with a total of 60 Italian-speaking adults, divided in two lists. Subjects were asked to evaluate donkey sentences such as (5)-(7) (in which the type of initial determiner is varied as a within-subject factor), with respect to 3 different scenarios (consisting of 4 pictures), in which the sentence was true on one or both (the two readings are not logically independent, e.g. (2) entails (3)) or none of the alternative interpretations. Please note that we only used fantasy characters and objects to control for interferences from extra-linguistic knowledge. Time to evaluate each sentence was recorded. Let’s consider some examples. Subjects were asked to evaluate sentences (5) and (6) in the critical scenarios (8) and (9) respectively. If subjects conformed to Kanazawa’s generalization, then they should reject both sentences in the relevant situation: (5) is true in (8) only on the \(\exists\)-reading, while (6) is true in (9) only on the \(\forall\)-reading, both readings being predicted as dispreferred by Kanazawa. Another manipulation was made, treated as a between-subject factor: sentences were presented alone (List 1) and after the addition of a biasing context, specifically designed to force the reading predicted as dispreferred by Kanazawa’s generalization (List 2). For example, sentence (5) was preceded by context (10), modelled after Chierchia (1995), prior to its evaluation in the scenario (8). Results. Subjects’ answers in List 1 seem to conform to the predictions derived from the generalization in (4), at least in case of *Some* and *No*: in both cases, subjects overwhelmingly prefer the \(\exists\)-reading (87% in case of *Some* and 93% in case of *No*). In case of *Every*, instead, subjects split, given that half of them accepted sentence (5) in condition (8). However, this result should be integrated with Reaction Times, which showed that subjects took significantly longer to accept (5) in (8) than in the scenario representing the \(\forall\)-reading. Moreover, the answers obtained by subjects in List 2 show that the availability of the alternative interpretation of the anaphora crucially varies in accordance with the initial head determiner: the dispreferred (\(\exists\)) reading is very easily accessed in case of *Every* (a significantly higher proportion of subjects in List 2 (i.e. 81%) judged sentence (5) true in the scenario (8), compared to List 1). Conversely, accessing the dispreferred (\(\forall\)) interpretation of the anaphora is much harder in case of sentences like (6) and (7), even in presence of a context that biases subjects towards this interpretation.

Conclusion. Two main points emerge from our results. Firstly, Kanazawa’s generalization seems to be empirically supported. The interpretation of donkey pronouns appears to be sensitive to the monotonicity properties of the determiners involved, along the lines indicated in (4). Secondly, such interpretations seem to be a matter of preference, i.e. a default that comes about in relatively “neutral” contexts, whose strength seem to depend on the type of determiner. Taken in a broader perspective, these results show that speakers unconsciously and systematically compute abstract properties pertaining to entailment patterns, as they tend to choose the interpretation of the donkey pronouns that retains the lexical properties of the determiner. Work on polarity sensitive items has arguably shown sensitivity to monotonicity patterns in determining the distribution of items like *any* (Chierchia, 2006) and in the derivation of scalar implicatures. Here we detect a similar phenomenon in connection with
a purely interpretive task (namely, how pronoun readings in non C-command anaphora are accessed). This paves the way for further research (e.g., with respect to testing the present claim with other determiners and settings) and confirms the value of integrating theoretical claims in semantics with experimental work.

List of examples and critical material used in the experiment

1. Every farmer who owns a donkey beats it
   \[
   \forall x \left( \text{farmer}(x) \land \exists y \ \text{donkey}(y) \land \text{has}(x,y) \right) \rightarrow \forall z \left( \text{donkey}(z) \land \text{has}(x,z) \rightarrow \text{beats}(x,z) \right)
   \]
   = Every farmer who owns a donkey beats all the donkeys he owns \([\forall\text{-reading}]\)

2. Every farmer who owns a donkey beats all the donkeys he owns
   \[
   \forall x \left( \text{farmer}(x) \land \exists y \ \text{donkey}(y) \land \text{has}(x,y) \right) \rightarrow \forall z \left( \text{donkey}(z) \land \text{has}(x,z) \land \text{beats}(x,z) \right)
   \]
   = Every farmer who owns a donkey beats all the donkeys he owns \([\forall\text{-reading}]\)

3. Every farmer who owns a donkey beats one of the donkeys he owns
   \[
   \forall x \left( \text{farmer}(x) \land \exists y \ \text{donkey}(y) \land \text{has}(x,y) \right) \rightarrow \exists z \left( \text{donkey}(z) \land \text{has}(x,z) \land \text{beats}(x,z) \right)
   \]
   = Every farmer who owns a donkey beats one of the donkeys he owns \([\exists\text{-reading}]\)

4. Det. monotonicity predicted reading

<table>
<thead>
<tr>
<th>Det.</th>
<th>predicted reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every</td>
<td>↓↑</td>
</tr>
<tr>
<td>No</td>
<td>↓↓</td>
</tr>
<tr>
<td>Some</td>
<td>↑↑</td>
</tr>
</tbody>
</table>

5. Every Flont that has a vilp keeps it in a bin
6. No Flont that has a murl preserves it in a jar
7. Some Glimp that has a dorf protects it under a leaf

8. On planet Flont there’s the plague of the termites. To face it, Flonts use special traps, the vilps. Fighting termites causes a lot of stress to the Flonts. To improve the situation, they consulted a famous magician who suggests them a remedy: they have to sacrifice a vilp putting it into a bin full of water; a vilp in the water doesn’t function as a trap anymore, but releases an anti-stress substance. Let’s see if Flonts are less stressed given that…

References
Signed languages (SLs) deserve a special place in the debate on abstractness and innateness in phonology. Of particular interest here is a specific construction widely used in SLs, namely classifier predicates (CL-Ps). In CL-Ps, the hand-shape stands for a class of objects (vehicles, containers of various shape, etc.), while location and movement somehow mimic the location or the movement of an object in the real world, (Emmorey 2001).

CL-Ps are morphologically complex entities (Supalla, 1982), where at least two components are active: hand-shape and location+movement. In (1a), the Y hand-shape is the classifier for flying objects in Italian Sign Language (LIS); the diacritic “O” indicates that the flight from Milan to Rome made a loop right after the take-off. The loop happened in the middle of the trip in (1b), and close to Rome in (1c). Further specifications about the loop (huge, long, fast, etc.) are provided by modulation of the movement. In principle, these uses of the signing space and movements display an infinite range of variation that is hard to encode phonologically: the inventory of a language consists of a finite list of symbols (see Emmorey and Herzig, 2003 for experimental evidence that space is not encoded categorically by signers of American sign language, ASL). Nonetheless, CL-Ps are part of SLs, and their behavior responds to syntactic constraints on argument structure (Benedicto and Brentari, 2004). From a semantic standpoint, Cecchetto and Zucchi (2006) analyze classifier predicates as complex demonstrative predicates, where the movement of a CL-P is the demonstration required by the demonstrative predicate. Still, the question of how the phonological system can handle CL-Ps remains open.

The present study explores an answer to this question in terms of a general phenomenon present in both spoken and signed languages: epenthesis. Concretely, CL-Ps instantiate a peculiar case of copying epenthesis of movement (for copying epenthesis in spoken languages, see Kitto and de Lacy, 1999). In other words, in the location+movement morpheme, location is phonologically specified for a –contact feature (i.e. CL-Ps are located in the space in front of the signer), while movement is underspecified, and its features are provided by epenthesis. However, standard epenthetic movement in LIS (and ASL) involves the +contact feature, and is incompatible with the location. Thus, copying epenthesis provides the feature specification for movement, and the result is a well-formed sign. However, since there is no movement in the input form (signs are generally monosyllabic, Brentari, 1998), the last resort is to copy features of the movement that the depicted object exhibited in the real world (providing also the demonstration required for the semantic component). Data that I will discuss come mainly from native signers of LIS.

To conclude, copying epenthesis from real world helps to shed light to some of the so called “iconic properties” of SLs: they are now integrated in the phonological system of SLs, and fall within the range of possibilities that UG employs to vehicle pairs of sounds/signs and meanings. Furthermore, since movement is the equivalent of the syllable nucleus in SL phonology (Brentari, 1998), copying epenthesis provides strong evidence for this abstract phonological level across modality, and candidates the syllable to be an innate phonological requisite for all human languages (signed and spoken). Finally, copying epenthesis can be viewed as an extreme case of the emergence of the unmarked.

Outline of the talk: a) A brief presentation of the phonological units of SLs. b) Standard cases of epenthesis in LIS (see data in 2): The analysis follows from Brentari (1998), i.e. spreading of movement blocks epenthesis in compounds. c) The proposal: CL-Ps are cases of copying epenthesis of movements from real world. d) Evidence: CL-Ps cannot compound with signs that have movement in their input form, as in (3); otherwise the epenthetic-demonstrative movement would be lost. CL-Ps can combine with signs that do not have movement in their input form, as in
(4); in this case copying epenthesis blocks standard epenthesis. e) Theoretical relevance: since real world copying epenthesis is not realized within morphemes, the constraints posed by Kawahara (2005) on the mechanism of copying/correspondence are not violated; i.e. constraints independently active in the spoken modality are active also in the signed modality.

**Original Data From LIS**

Infinite range of variation

(1) a. MILAN₁ ROME₂ CL-Y₁Ο₂
b. MILAN₁ ROME₂ CL-Y₁Ο₂

c. MILAN₁ ROME₂ CL-Y₁Ο₂

“an aircraft from Milan to Rome made a loop”

(lower case indices indicate that spatial agreement occurs between the indexed sign and the classifier predicate for aircraft).

Standard cases of epenthesis in LIS

(2) a. WORK (it has underlying repeated movement)

b. KNOW/HEAD (it has epenthetic repeated movement)

d. KNOW-DONE (the epenthetic movement disappears in the compound)

d. WORK-DONE (the non-epenthetic movement is retained in the compound)

Evidence from real world copying epenthesis

(3) a. *CIY-pred.-DONE

b. *DONE-CIYpred.

(4) HEAD-CY-pres

“Header” (a kind of shoot in soccer)

(Epenthetic movement of HEAD shown in (2b) is not present in the compound)

**References**


The Saliency Factor in Studies on the Acquisition of Principle B

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Background: Children’s knowledge of Principle B of the Binding Theory (Chomsky 1981) has been widely investigated. One of the most influential studies in this area is Chien & Wexler (1990) (C&W). In C&W’s experiment, children were shown pictures and then asked questions about them. Some trials had potential QP antecedents for the pronouns, others had DPs as antecedents, as in (1a)-(1b). In the picture presented in their paper for the case of QP antecedents, there were 3 bears touching themselves and Goldilocks next to them, not touching herself. The experimenter presented the picture to the child and then asked the question in (1b). Given that there were 2 potential antecedents for the pronoun (the QP every bear and the DP Goldilocks) and that the picture showed every bear touching herself, if the child answered ‘yes,’ she was picking the QP as antecedent; if she answered ‘no,’ she was picking Goldilocks as the antecedent. If children were constrained by Principle B, only the fourth character (Goldilocks) could be taken as the antecedent for the pronoun. C&W found that children behaved poorly when the antecedent for the pronoun was a DP (1a), but behaved in an adult-like fashion when the antecedent was a QP (1b). These results have been replicated in many other studies and are taken as evidence to Reinhart’s (1983) version of the Binding Theory, which claims that Principle B applies only to pronouns interpreted as bound variables, as in (1b). Given that children rejected it, it shows their knowledge of the principle. In (1a), the pronoun can be bound or referential. If it is referential, its distribution is not regulated by Principle B, but by Rule I, proposed by Reinhart (1983). C&W claim that children’s poor performance on (1a) is due to problems with Rule I, not Principle B.

Proposal: In the present study, I provide experimental evidence indicating that C&W’s results are an experimental artifact. C&W claim that in (1b) children answer ‘no’ more often because they are constrained by Principle B. However, they did not consider the possibility that the reason why children picked Goldilocks as the antecedent for the pronoun is Goldilocks’ saliency in the context, not Principle B. I believe this possibility is highly likely, as the picture shown to children had Goldilocks much bigger than each of the 3 bears, which obviously made her stand out. Also, all 3 bears were identical and Goldilocks was physically different from them (c.f. Elbourne (2005)).

Experiment: In order to test this hypothesis, I conducted an experiment designed to investigate the effect that the saliency of the fourth character present in C&W’s pictures would have on sentences where Principle B is not operative. Children’s answers to these sentences could then be compared to their answers to sentences where Principle B is operative: if their answers were similar, this would indicate that Principle B could not be the sole factor guiding children’s responses. Two types of pictures were presented to children (sentences in (2)). Type I was similar to the ones in C&W’s experiment: it had 3 identical elements performing a reflexive action and a fourth, bigger character not performing a reflexive action. Type II (shown below) depicted 3 identical characters touching their hat and the fourth character not touching its hat. In (2b), the pronoun can be interpreted as bound, as Principle B is not relevant. 19 English-speaking children from 3;7 to 5;11 years of age were interviewed (mean age = 4;7). There were 4 trials of each type. Results are shown in table 1.

Discussion: Children behaved similarly in both cases, even though in one case a ‘yes’ response constitutes a Principle B violation, while in the other case it doesn’t. This supports my hypothesis about the saliency of the fourth character in the pictures. With children’s attention drawn to this more salient character, they answer ‘no’ to (1b) more often, but this answer cannot be attributed to Principle B. These observations can be extended to the experiments in Thornton and Wexler (1999), where stories were told to children, not pictures. The same problem arises, as the stories had one character stand out as the protagonist and other 3 identical characters, which were less prominent. The same confounding factor is clearly repeated. My results indicate that C&W’s and Thornton and Wexler’s experiments had a confounding factor, making it possible that children’s answers were not guided by a grammatical factor, but by something outside the grammar. If so, their conclusion about...
children’s knowledge of Principle B does not necessarily go through, and the strongest evidence for Reinhart’s version of the Binding Theory is no longer available.

Examples:
(1)  
   a. This is Mama Bear, this is Goldilocks. Is *Mama Bear* touching her?  
      (50% of acceptance)  
   b. These are the bears, this is Goldilocks. Is *every bear* touching her?  
      (16% of acceptance)  

(2)  
   a. Type I (QP – him): Principle B violation possible  
      These are the monsters, this is Alladin. Is *every monster* scratching *him*?  
   b. Type II (QP – his NP): Principle B not operative  
      These are the dogs, this is Mama Bear. Is *every dog* touching *her* hat?  

Picture from the Saliency test (type II):

Table 1: Acceptance rates on the Saliency experiment

<table>
<thead>
<tr>
<th>Sentence type</th>
<th>Group (N = 19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>QP – him</td>
<td>31.5%</td>
</tr>
<tr>
<td>QP – his NP</td>
<td>30.2%</td>
</tr>
</tbody>
</table>

References
Contrastive Topics Revisited: a Simpler Set of Topic-Alternatives
Yurie Hara and Robert van Rooij (Kyoto University/University of Amsterdam)

Contrastive Topic (CT), marked by prosody as in English and German (Topic-Focus contour) or by morphology as in Japanese (-wa) and Korean (-nun), is often accompanied by implicatures as in (1) and (2).

**Partial Answer** Büiring (1997), one of the most influential works on CT, models his analysis on the framework of Rooth’s (1985, 1992) *Alternative Semantics for Focus* and proposes a complex structure of alternatives. The CT-marking generates a (Contrastive) Topic value, which is a set of sets of propositions, i.e., a set of question meanings. For example, the Topic value for (1) is shown in (3). Büiring claims that the CT-marked sentence is infelicitous if there is no unanswered question in its Topic value.

Although Büiring’s proposal accounts for a range of data such as scope inversion (2) and infelicity of CT-marking with universal quantifiers in affirmative context (4), the proposal makes the wrong prediction when questions can be completely resolved as in (5-b) (also noted in Kadmon (2001)). One might try to save Büiring’s analysis by limiting the domain of the partial-answer requirement to each conjunct. For example, in (5-b), the proposition expressed by the first conjunct ‘John came’ is a partial answer to the question (5-a), and so is the one expressed by the second conjunct ‘Mary didn’t come.’ As long as each of the CT-marked conjuncts can be treated as partial answers, CT-marking is possible. However, this strategy fails if we look at (5-c). With CT-marking, it is prohibited to have positive values for all the alternatives unless there is some extra force (e.g. a use of additive particles) which cancels the contribution of the CT-marking.

**Limited Competence** In the recent literature on conversational implicatures (Sauerland, 2004; Spector 2003; Van Rooij and Schulz 2004), quantity implicatures are derived in two steps (6). One might notice that the implicatures induced by CT (see (1) and (2-a)) are very similar to the conversational quantity implicatures. Hence, Hara (2005) entertains the idea that the CT-marking indicates the speaker’s limited competence in terms of quantity implicature computation, namely by removing the opinionatedness assumption.

However, this approach makes the wrong prediction for (7-b). In (7-b), it is inferred that the speaker does not know that one of the alternatives, namely ‘John ate pears’, is true. Since the above approach to CT removes the opinionatedness assumption (i.e., no strengthening), it is predicted that there would be an implicature that the speaker considers it to be possible that John ate pears. This is the wrong prediction because the most salient interpretation of (7-b) is (8).

**Proposal** We propose that the role of Topic-marking is to draw the hearer’s attention to a particular entry in the set of alternatives, and the reason behind this move is that the speaker doesn’t know whether alternative propositions are true. Hence, we elaborate an analysis that CT presupposes a question, forms a simple set of Topic-alternatives, and gives rise to the conventional implicature that one of the Topic-alternatives is not known to be true, as defined in (9). For example, (10) depicts the interpretation of the first conjunct in (5-b). (10-b) is compatible with the second conjunct of (5-b) (the assertion of the second conjunct merely strengthens the implicature). In (5-c), in contrast, the CT of the first conjunct implicates \( \neg K_{sp}(Mary \ came) \), which contradicts what the second conjunct entails, \( K_{sp}(Mary \ came) \).

Notice that, unlike Büiring’s approach (and Kadmon’s approach which adopts Büiring’s definition of Topic value), our proposal does not involve a complicated structure of Topic alternatives. However, (9) can handle the data observed by Büiring. For example, in (2), the alternatives of the \( \neg \forall \) reading are listed in (11). By (9), CT-marking indicates that either (12-a) or (12-b), which entails that the speaker thinks that it is possible that somebody came (2-a). For the \( \forall \neg \) reading, on the other hand, the alternatives are listed in (13). Now, (9) specifies either (14-a) or (14-b). Both are incompatible with the speaker’s knowledge entailed by the assertion, \( K_{sp}(\forall x(person(x), \neg came(x))) \). Thus, (2-b) is ruled out.

Furthermore, unlike Hara’s approach, our proposal does not remove the speaker’s competence for general conversational implicature computation. The first conjunct of (7-b), therefore, gives rise to the interpretation that John didn’t eat pears (thus, John ate only apples.), and by (9), the CT independently implicates that it is not the case that the speaker knows Mary ate apples. These implicatures are compatible with the assertion of the second conjunct and its implicatures.
1. \([_{\text{CT}} \text{John } ] \) came. (implicates: ‘Possibly, others didn’t come.’)

2. \(\text{ZEN’IN-wa } \text{ko-nakat-ta.}\)
   Everyone-CT come-Neg-Past
   a. It is not the case that all the people came. \((\neg \forall; \text{implicates ‘Possibly, some came.’})\)
   b. *All the people are such that they didn’t come. *(\(*\forall \neg\*)

3. Büring’s Topic value of (1):
   \(\{ \{ \text{John came, John didn’t come.} \}, \{ \text{Mary came, Mary didn’t come.} \}, \{ \text{Bill came, Bill didn’t come.} \}, \ldots \}\)

4. *\(\text{ZEN’IN-wa } \text{ki-ta.}\)

5. a. Of John and Mary, who came to the party?
   b. \([_{\text{CT}} \text{John } ] \) came, and \([_{\text{CT}} \text{Mary } ] \) didn’t come.
   c. *\([_{\text{CT}} \text{John } ] \) came, and \([_{\text{CT}} \text{Mary } ] \) came. (Japanese \(\text{wa-marking patterns the same.})

6. Two steps of deriving quantity implicatures (Sauerland, 2004; Spector 2003; Van Rooij and Schulz 2004)
   1. It is inferred that the speaker does not know that the alternatives not entailed by the assertion are true.
   2. On the assumption that the speaker is opinionated, this inference is strengthened and it is concluded that the speaker knows that these alternatives are not true.

7. a. Who of John and Mary ate what (of apples and pears)?
   b. \([_{\text{CT}} \text{John } ] \) ate \([_{\text{F}} \text{apples } ] \) and \([_{\text{CT}} \text{Mary } ] \) ate \([_{\text{F}} \text{pears } ] \).

8. The most salient interpretation of (7-b)
   John ate only apples and only John ate (only) apples, and Mary ate only pears and only Mary ate (only) pears.

9. Let \(T\) be the CT-marked elements, \(sp\) the speaker, \(P\) the question predicate, a sentence with a Contrastive Topic implicates: \(\exists T’[T’ \in Alt(T)][\neg K_{sp}(P(T’))]
   \) (The question predicate \(P\) is obtained by lambda abstraction over the asserted proposition using a designated variable (c.f. Kratzer, 1991).)

10. a. \(P = \lambda x \in D_c . \text{came}(x); Alt(T) = \{\text{John, Mary}\}\)
    b. implicature: the speaker does not know that Mary came. (Possibly, Mary didn’t come.)

11. Topic Alternatives of \(\neg \forall\) reading of (2)
    \(\{ \neg\text{all} x(\text{person}(x), \text{came}(x)), \neg\text{most} x(\text{person}(x), \text{came}(x)), \neg\text{some} x(\text{person}(x), \text{came}(x)) \}\)

12. Implicatures of \(\neg \forall\) reading specified by (9)
    a. \(\neg K_{sp}(\neg\text{most} x(\text{person}(x), \text{came}(x)))\)
    b. \(\neg K_{sp}(\neg\text{some} x(\text{person}(x), \text{came}(x)))\)

13. Topic Alternatives of \(\forall \neg\) reading of (2)
    \(\{ \text{all} x(\text{person}(x), \neg\text{came}(x)), \text{most} x(\text{person}(x), \neg\text{came}(x)), \text{some} x(\text{person}(x), \neg\text{came}(x)) \}\)

14. Implicatures of \(\forall \neg\) reading specified by (9)
    a. \(\neg K_{sp}(\text{most} x(\text{person}(x), \neg\text{came}(x)))\)
    b. \(\neg K_{sp}(\text{some} x(\text{person}(x), \neg\text{came}(x)))\)

A Head-Internal Relativization Parameter: D and EPP in Gur

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1. The Issue –HIRCs and Parameters–: Various linguists have proposed parameters for Head-internal Relative Clauses (HIRCs). Kuroda (1974-77/1992) and Cole (1987) put forth the famous word order generalization that HIRCs are restricted to SOV languages (with a null pronoun) (cf. also Kayne 1994). Watanabe (1992) argued that Wh-in-situ is the defining parameter. However, such proposed parameters are challenged by Gur languages of the Niger-Congo family spoken in the northern parts of West Africa. My detailed fieldwork research of HIRCs in several Gur languages has shown that they attest HIRCs even though they are SVO languages without pro-drop. Furthermore, not all Gur languages allow HIRCs. Some of them (Bùli, Kabiyé, Mooré, Dagbani) allow HIRC, while others (Guren, Dágááré, Sisala-Pasaale, Kɔnni) lack HIRC. Significantly, Wh-in-situ does not correlate with the availability of HIRCs either.

2. The Generalization –HIRCs in Gur and D–: Typologically, HIRCs in Gur are of the D-Type (see also Navajo, Lakhota, Georgian, etc.) and hence a D element appears externally to the relative clause. Those Gur languages that allow HIRCs include Bùli, Kabiyé, Mooré, and Dagbani. In HIRCs (1a)/(2a), the head remains in-situ, while in Bùli (1b) and Kabiyé (2b), the head is dislocated to the left. On the other hand, those Gur languages that do not allow HIRCs include Sisala-Pasaale, Guren, Kɔnni, and Dágááré. As illustrated in Sisala-Pasaale (3) and Dágááré (4), the relativized head obligatorily moves the left periphery. A close examination reveals an interesting descriptive generalization that those Gur languages with HIRCs (i) show a D element (lá and yi3) at the right edge of the relative clause, whereas those Gur languages without HIRCs (ii) show a D element adjacent to the head noun at the left edge. Such positioning of D is true of D-Type HIRCs cross-linguistically (cf. Navajo, Lakhota, Miskitu, Diegueño, etc.).

   i. [[ ... SUBJ V [OBJ ... ] D ]] (Bùli, Kabiyé, Mooré, Dagbani)
   ii. a. [[ OBJ D [ ... SUBJ V tOBJ ... ]] ] (Sisala-Pasaale)
       b. [[ OBJ-D [ ... SUBJ V tOBJ ... ]] ] (Kɔnni)
       c. [D OBJ [ ... SUBJ V tOBJ ... ]] (Dágááré)
       d. [OBJ D [ ... SUBJ V tOBJ ... ] D ] (Guren)
       e. [D [ ... SUBJ V [OBJ ... ] ] ] (Unattested cross-linguistically)

The DP structure, in contrast, is head-final (except Dágááré, whose D precedes N cf. (4)/(1ic)). In Bùli, the definite determiner/class marker follows the head noun as in (5a). In (5b), the demonstrative determiner lá further follows (5a).

3. A Parametrization of D –EPP and Selection–: Building on the above observations, I propose that the head-finality of DPs in the Gur languages is derived from the head-initial word order by EPP\([_{DP}]\) (see (6) and (7)). Now, I further propose that D in HIRC languages has an EPP feature that attracts CP: EPP\([_{CP}]\), whereas D in non-HIRC languages lack such a feature. This is what I call The Head-Internal Relativization Parameter (8). Under this parametrization, HIRC results from the derivation (9b). Significantly, note that such a derivation is impossible in non-HIRC languages. “Left-headed” relative clauses in (1b) and (2b) are derived similarly with the only difference being that the relativized head noun undergoes overt movement to the edge of CP as in (9c). The unattested HIRC (1ie) is impossible since the relation between D and the relativized head noun is too non-local.

4. Explaining Further: The proposed parametrized theory of HIRCs make a number of correct predictions.

   Prediction One. In HIRC languages, if there is no overt D, there is no EPP\([_{CP}]\). Therefore, D cannot attract CP and hence HIRCs should be prohibited (cf. √ Bùli (10a), √ Kabiyé (10b), √ Mooré, √ Dagbani).

   Prediction Two. Culy (1990) makes a typological observation that a language will have HIRCs only if it also has other similar nominalized sentences with the independency properties. Culy’s Generalization follows from the proposed parameter. The same relative clauses (without any relativized head nouns) function as Factive Constructions (cf. √ Bùli, √ Kabiyé, √ Mooré, √ Dagbani; i=no data).

   Prediction Three. The derivation of the “Left-headed” relatives (9c) predicts that the relative clauses in (1b)-(2b) are still internally-headed (see also Basilico 1996 for Mojave, Diegueño etc.). An embedded adverb can precede the left-dislocated head noun (cf. √ Bùli (11), √ Kabiyé, √ Mooré, √ Dagbani).
Predication Four. A possessed noun can be pied-piped (cf. √Bàlì (12), √Kabyê, √Mooré, √Dagabani). These are unexpected if the “Left-headed” relative clauses are externally-headed.

(1) a. Ámɔak rà [Àtim àlì s"à nà:-bùy lá]. Amok saw Atim C own cow-Rel Dem ‘Amok saw the cow which Atim owns.’
    b. Ámɔak rà [ná:-bùy *àlì Àtim s"à lá]. Amok saw cow-Rel C Atim own Dem ‘Amok saw the cow which Atim owns.’

(2) a. [mà-nà há ǹ-gá tèdè yë], kɛ-gɔmá. 1Sg.-saw dog.Sg. N-Cl yesterday D(R) 3Sg.-came ‘The dog I saw yesterday came.’
    b. [há ǹ-gá má-nà tèdè yë], kɛ-gɔmá. dog.Sg. N-Cl 1Sg.-saw yesterday D(R) 3Sg.-came ‘The dog I saw yesterday came.’

(3) kuwori ha bi na [bìj hù u áá kyr]. Negative see faces D he Imp want ‘The chief still didn’t see the faces he was wanting.’

(4) nì dà sàrɛ lá [à gànì̀ (nà) Dàkóraà náng ngmàà]. 1Sg. Pst read F D book Dem Dakoraa Rel write ‘I read the book that Dakoraa wrote.’

(5) a. màngò-kù b. màngò-kù-lá c. N-Adj-Cl.-D-Dem mango-D.Sg. mango-D.Sg.-Dem ‘the mango’ ‘that mango’

(6) D in these Gur languages (except Dàgàárè) has an EPP<sub>DP</sub> feature and attracts DP to its specifier.


(8) In relative clauses in Gur, D in the languages with HIRCś has an EPP<sub>CP</sub> feature, whereas D in the languages without HIRCś only has EPP<sub>DP</sub> feature.


(10) a. *Àmɔak rà [Àtim àlì s"à nà:-b]. Amok saw Atim C own cow.Indef. Dem ‘Amok saw a cow which Atim owns.’
    b. *[mà-nà sùm há] kù-gàŋ. 1Sg.Neg. know dog.Indef. 3Sg.-come.Prog. ‘A dog that I don’t know is coming (toward me).’

(11) Àtim dè [(diem) mángò-tí:] (diem) àtì Ámɔak dà (diem) lá]. Atim ate yesterday mango-Rel yesterday C Amok bought yesterday Dem ‘Atim ate the mango that Amok bought yesterday. (i.e. Amok bought yesterday’)

(12) a. Àtim dà [Àmɔak àlì ǹmìrìṣì ǵbán-kày nàŋ-kày lá]. Atim bought Amok C designed book-Rel cover-D Dem ‘Atim bought the book whose cover Amok designed.’
    b. Àtim dà [ǵbán-kày nàŋ-kày àtì Ámɔak ǹmìrìṣì lá]. Atim bought book-Rel cover-D C Amok designed. Dem
The Rhythmic Foundations of NONFINALITY and INITIAL GRIDMARK

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Two of the principal constraints in current approaches to metrical stress theory, NONFINALITY (Prince and Smolensky 1993) “final syllables are stressless” and INITIAL GRIDMARK (Prince 1983) “initial syllables are stressed”, stand out for their asymmetrical formulations. Although the asymmetries have been justified primarily on typological grounds, I argue that they can be motivated on rhythmic grounds, as well, when we consider the different types of tempo changes that often occur in peripheral syllables. In particular, I argue that initial syllables attract stress because it supports tempo acceleration and that final syllables repel stress because it hinders tempo deceleration.

The primary typological support for NONFINALITY and INITIAL GRIDMARK comes from their usefulness in predicting iambic-trochaic asymmetries (Hyde 2002, 2007). When NONFINALITY is responsible for introducing lapse, for example, its final stresslessness requirement can promote the lapse at the right edge of the odd-parity form in the trochaic (1a) but not at the left edge in the iambic mirror image (1b), explaining why (1a) is attested but (1b) is not.

(1) a. Pintupi (Hansen and Hansen 1969) b. Unattested
    σ̄σ̄σ̄σ̄
    σ̄σ̄σ̄σ̄

(2) a. Passamaquoddy (LeSourd 1993) b. Unattested
    σ̄σ̄σ̄σ̄
    σ̄σ̄σ̄σ̄

Similarly, when INITIAL GRIDMARK is responsible for introducing clash, its initial stress requirement can promote the clash at the left edge in the trochaic (2a) but not at the right edge in the iambic mirror image (2b), explaining why (2a) is attested but (2b) is not.

Although the typological evidence for the asymmetrical formulations is persuasive, phonetic evidence strengthens the case considerably. It is well-known that segments in initial syllables (Oller 1973, Keating et al. 2003) and final syllables (Öller 1973, Wightman et al. 1992) often exhibit increased phonetic length but that the nature of the lengthening is different in the two positions. In final syllables, lengthening typically affects all rhyme segments to some degree, is often associated with decline in amplitude and devoicing, and is often cumulative when boundaries on multiple levels coincide. In initial syllables, however, lengthening is usually limited to the first segment, is associated with longer voice onset time and aspiration, and is less typically cumulative.

In music, a similar peripheral lengthening phenomenon is attributed to changes in tempo. According to Gabrielson (1993), the initial and final measures of a musical phrase often have a slower tempo than medial measures, with acceleration to the medial tempo occurring during the early measures and deceleration occurring during the late measures. The changes in tempo during the late measures are typically much more pronounced than the changes in tempo during the early measures and appear to be cumulative when the boundaries of multiple levels coincide.

Assuming that the linguistic phenomenon parallels the musical – that the greater length in initial syllables corresponds to a strong attack and acceleration and the greater length in final syllables corresponds to a deceleration – then the differing nature of the tempo changes provides the basis for the differing characteristics of lengthening in the two positions and supplies strong motivation for INITIAL GRIDMARK and NONFINALITY’s asymmetrical formulation. Since accented syllables typically maintain a higher level of intensity (amplitude, aspiration, etc.) than unaccented syllables (Lieberman 1960, Beckman 1986), accent is compatible with the characteristics typical of initial lengthening/acceleration but not with the characteristics typical of final lengthening/deceleration. Stress is attracted to initial position because the intensity of an accent supports a strong attack and acceleration. Stress is repelled from final position because the intensity of an accent would hinder deceleration.

The proposal is an improvement over previous approaches that also attempt to connect NONFINALITY to final lengthening but without taking the specific nature of the lengthening into account. According to Lunden (2006), for example, extra length is one of the primary cues for stress, but it is more difficult to perceive when added to vowels that are already long. Since final syllables are already subject to phonetic final lengthening, making perception of additional stress-related length more difficult, stress avoids final syllables. Such an approach, however, does not really capture NONFINALITY’s asymmetrical application. Initial and medial syllables frequently contain longer vowels, so stress should avoid these, as well. Also,
greater length implies stress attraction cross-linguistically, not stress repulsion; there does not appear to be any language where stress is prohibited on longer vowels, in general, in preference to shorter vowels.

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Negative Quantifiers and Scope Diminishment
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1. The Problem
The apparent impossibility of Negative Quantifiers (henceforth Neg-Q) to be interpreted in the foot position of an A-chain, as in (1), from Lasnik (1999), has been taken as conclusive evidence against A-movement reconstruction (Lasnik, (1999) Chomsky (1995)):

(1) a. No large Mersenne number was proven to be prime
b. No one is certain to solve the problem

The more modest position takes A-movement reconstruction to be possible, subject to constraints (Johnson & Tomioka, 1997; Fox, 2000; Boeckx, 2001; Von Fintel & Iatridou, 2002), some of them still poorly understood. In support of the latter view we argue that scope diminishment of Neg-Q's is not, in principle, impossible. We show that independent constraints on negative placement and on the interpretive positions available to DP conspire to exclude Neg-Q diminishment in (1).

2. The Proposal
The analysis covers the interpretation of Neg-Q in the matrix subject position of raising predicates, including raising verbs/adjectives and epistemic and deontic modal constructions. We argue that negative Q's are to be decomposed, semantically, into a negative ingredient and an indefinite, and that the interaction of constraints on negative placement relative to the predicate, and constraints on the interpretive position of DP produces the three-way typology schematized in (2). Depending on the choice of predicate, the entire Neg-Q may be interpreted below the predicate, as in (2a), in addition to the wide scope interpretation in (2c). Neg-Q may also be 'split', as in (2b), where the negative component is interpreted above the predicate and the indefinite component below it:

(2) a. Full Diminishment:  Pred  No DP  \[ Neg Raising, \text{Modal}>\text{Neg} \\
    b. Partial Diminishment:  \text{Neg}  Pred indefinite  \[ Neg>\text{Modal} \\
    c. No Diminishment:  No DP Pred \[ TP  \ldots  \[ certain, likely, guarantee

The typology in (2) represents 2 independent factors: (i) diminishment of the DP ingredient is determined by locality, such that an intervening infinitive TP blocks a low indefinite interpretation, as in (2c). When no such TP is present, i.e. in 'restructuring' infinitives and in modal constructions, the DP may be interpreted in the embedded position. The interpretive position of negation ((2a) vs. (2b)/(2c)) is due to (ii) general constraints on the position of negation relative to the predicate, including both (a) conditions on Neg-Raising (the possibility for a negative expressed high to be interpreted lower), and, in the modal domain, (b) the relative scoping of modal and negation ('must>not' vs. 'not>have to', for example). If so, the absence of scope diminishment in (1) follows from independent constraints, substantially weakening the argument against A-mvt reconstruction.

3. The Interpretive Positioning of Neg
The central ingredient underlying (2) is the independence of negation and the indefinite DP in the computation of Neg-Q's. Potts (2000) analyzes the English negative polarity modal 'need' on a par with Neg-Split in German and Dutch; here we show that English Neg-Split is more widespread than previously supposed, generalizing to modal environments in which negation scopes over the modal. The independence of Neg, at least in English, is conditioned by the relative scoping of negation and modal, represented here by deontic 'may' (neg>may) vs. epistemic 'may' (may>neg), in (5) and (6). This is seen most clearly in the existential contexts in (5-6) where high de re readings are independently excluded, but extends to matrix Neg-Q's as well. See (7-8) for distinct deontic modals (epistemic modals with de re readings are independently excluded (Von Fintel & Iatridou 2003)):

(5) a. There may be no physician present (during these interrogations) deontic: neg>may
    b. It is not permitted that there is a physician present neg>may>a
    c. *no physician x, x is permitted to be present neg>a>may
    d. *It is permitted that no physician is present may>neg>some

(6) a. There may be no physician present (in the ward right now) epistemic: may>neg
    b. *It is not possible that there is a physician present neg>may>some
    c. It is possible that no physician is present may>neg>some
    d. *There is no physician for who it is possible that x is present
4. The Interpretive Positioning of the Indefinite

Our analysis of Neg independence leads to the expectation that raising predicates, which invariably scope under negation, should at least allow Neg-Split and partial diminishment. 'Certainly', 'likely', and 'guarantee', however, do not, while 'seem' and 'appear' do. This is seen most clearly when high de re is excluded (due to contradiction in content):

(10) a. No book is certain/guaranteed to have been written about Nixon
b. *It is guaranteed that no book about Nixon has been written
   guar>neg>some
c. *It isn't guaranteed that a book has been written about Nixon
da. *No book about Nixon x, x is guaranteed to have been written
   neg>some>guar

(11) a. No book seems/appears to have been written about Nixon
b. It seems that no book about Nixon has been written
   seem>neg>some
c. It doesn't seem that a book about Nixon has been written
   neg>seem>some
d. *No book about Nixon x, x seems to have been written
   neg>some>seem

The availability of both (11b-c) follows from the Neg-Raising nature of these predicates, such that Neg may also be interpreted in the embedded clause; (11b) vs. (10b) attests again to the independence of Neg. The crucial difference between (10) and (11) (and the modal contexts above), however, revolves around the interpretive position of the indefinite. Following Wurmbrand (2006) on infinitival tense, we take the raising predicates in (11) to involve restructuring, i.e. a relatively 'small' vP infinitive; those in (10) include more structure, possibly TP. We conclude that indefinite lowering is possible only when the infinitive is a bare vP:

(12) a. +Neg Q scope diminishment = restructuring V [... Subj … [vP …
b. -Neg Q scope diminishment = less restructuring V [... TP … ]vP … ]vP …

Our analysis puts complements to modals on a par with restructuring and implies that (a) scope diminishment is subject to stricter locality than Raising, and (b) diminishment is necessarily to spec vP. This is compatible with the truth-conditional equivalence of (11b) and (11c) if, following Johnson & Tomioka (1997), subjects reconstruct to a position below negation. The absence of indefinite lowering below Neg in (10), however, raises questions regarding scopal interactions between matrix subjects and objects embedded within infinitives, to be addressed in the talk.
The aim of this study is to suggest an analysis of (forward) Gapping in Turkish in the Minimalist Framework, by arguing that gapping can target only a matrix Tense Phrase (TP) as elision site. Gapping cannot occur in non-matrix domains. This accounts for why gapping cannot occur in (non-)embedded complement clauses (Hankamer 1972, Kornfilt 2000). As additional evidence, I show that gapping in NP/DP domain is also ungrammatical in Turkish. Since Turkish is an overt-V-raising language (Kural 1992, Aygen 2002) where V raises to Tense (Aygen 2002), I argue that gapping targets TP as elision site in matrix clauses (ex. 1a-b). Gapping in both embedded and non-embedded complement clauses is bad (ex. 2a-b, respectively). However, as Kornfilt shows, when the embedded clause follows the matrix verb, gapping is grammatical (ex. 3). Kornfilt, to explain the contrast between ex. 2a and ex. 3, claims that only a verb can occur in the rightmost periphery in complement clauses when these clauses are in their canonical position. In ex. 3, on the other hand, the whole conjunction of complement clauses is scrambled, after which gapping occurs. However, gapping is also grammatical when only the remnants follow the matrix verb (ex. 4), which shows that the whole conjunction of complement clauses need not to be scrambled to the right-periphery of the matrix clause.

In ex. 4, according to Kornfilt, the second conjunct would be scrambled, which would be a Coordinate Structure Constraint (CSC) violation (ex. 5). One could argue that the remnants in gapping structures have to be the rightmost elements linearly, depending upon the data in ex. (2a-b, 3 and 4). In this case, especially ex. (4) would require that gapped remnants right-adjoin to the matrix clause. However, since gapped remnants bear (contrastive) focus (Pesetsky 1982, Johnson 2003) and focused elements cannot occur post-verbally (ex.6) in Turkish, we cannot argue for the rightward-adjunction of remnants in gapping structures. Also, the fact that gapping cannot occur NP/DP-internally in Turkish (ex. 7) would require a different account in Kornfilt’s analysis since there is no embedded verb in those DPs to occur in the rightmost periphery of NP/DP.

So, I contend that in gapping structures a matrix TP projection is/has to be deleted. This way, we can account for why gapping cannot occur in complement clauses and NP/DPs. As Ince (2007) has argued, embedded complement clauses lack TP layer; however, FCCs, I argue, have a TP layer (contra Aygen (2002)). So, gapping cannot occur in non-matrix clauses (ex. 2a-b), whether they have a TP or not. Lack of NP/DP-internal gapping is further evidence for my proposal in that gapping cannot occur NP/DP-internally because NP/DPs are also non-matrix domains lacking a matrix TP. As to gapping structures where the remnants from the complement clause follow the matrix verb (ex. 4), I argue that the conjunction consists of two matrix clauses rather than two complement clauses. In these cases, the remnants move to the left periphery of the second conjunct—a matrix clause-, followed by the elision of the TP in the second conjunct (ex. 8 as the underlying form for ex. 4). As to the grammatical gapping structures where the antecedent complement clause as well as the gapped remnants follow the matrix verb, the conjunction again consists of two matrix clauses, to the first of which the antecedent complement clause is right-adjointed. In these structures, again, the remnants move to the left periphery of the second conjunct (ex. 9 as the underlying form for ex. 3). Further evidence for this proposal comes from disjunction structures (ex. 10). In a gapping structure where the remnants are from an embedded complement clause, if the elision site is the matrix clause, one would expect the reading ‘Ahmet knows P or Ahmet knows Q’. In (ex. 10), the reading is: ‘Ahmet knows P or Ahmet knows Q.’ So, the elements in the disjunction
structure are two matrix clauses, which supports my claim that the elision site in the example 8 is the matrix clause.
The condition that a matrix TP projection has to be deleted in gapping shows that certain kinds of ellipsis require different kinds of phrasal projection. Sluicing, for example, can occur in complements clauses, unlike gapping (Ince 2006, to appear).

   ‘Burak went to the library and Mustafa to the hospital.’

b. . . ., Mustafa (da) hastane-ye: [TP . . . t1 . . . t2 . . .]
   also hospital- DAT

2. a. *ZEYNEP [[Hasan-in karides-i ye-dig-in-i],
   Hasan-GEN shrimp-ACC eat-FNOM-3.SG-ACC
   [Mehmed-in de istiridye-yi __ ]] duy-du
   Mehmet-GEN and oyster-ACC hear-PAST
   ‘ZEYNEP heard that Hasan ate the shrimp, and Mehmet (ate) the oyster.’

b. *Ahmet [[Hasan karides-i ye-di], [Mehmet te istiridye-yi __ ]]
   Ahmet Hasan shrimp-ACC eat-PST Mehmet and oyster-ACC
   san-iyor
   believe-PRPROG
   ‘Ahmet believes Hasan ate the shrimp and Mehmet (ate) the oyster’ (Kornfilt 2000)

3. ZEYNEP duy-du [[Hasan-in karides-i ye-dig-in-i],
   Zeynep hear-PAST Hasan-GEN shrimp-ACC eat-FNOM-3.SG-ACC
   [Mehmed-in de istiridye-yi __ ]]
   Mehmet-GEN and oyster-ACC
   ‘ZEYNEP heard that Hasan ate the shrimp, and Mehmet (ate) the oyster.’

   GEN cake-ACC eat-IRR-COMP-POSS3S-ACC know-PROG
   Meral-in (de) dondurma-yi.
   -GEN also ice.cream-ACC
   ‘Ahmet knows that Hasan ate the cake and Meral the ice-cream.’

5. [CP [CP . . . [ConjP CP1 [Conj’ Conjo t2 ] Vomatrix ] CP2 ] CSC violation

   -ACC see-PST -ACC
   ‘Ali saw HASAN.’

7. *Ahmet Ali-nin bu teorem-i ispat-in-a , Meral-in de 
   -GEN this theorem-ACC proof-POSS3S-DAT -GEN also
   o teorem-i <ispat-in-a> hayran kal-di
   it theorem-ACC proof-POSS3S-DAT fan stay-PST
   ‘Ahmet adored Ali’s proof of this theorem and Meral’s of that theorem.’

8. Ahmet [Hasan-in pasta-yi ye-di-g-in]-i bil-iyor,
   -GEN cake-ACC eat-IRR-COMP-POSS3S-ACC know-PROG
   Meral-in (de) dondurma-yi [ Ahmet [ t1 t2 ye-di-g-in]-i bil-iyor.
   -GEN also ice.cream-ACC eat-IRR-COMP-POSS3S-ACC know-PROG
   ‘Ahmet knows that Hasan ate the cake and (Ahmet knows that) Meral (ate) the ice-cream.’

9. ZEYNEP duy-du [Hasan-in karides-i ye-dig-in-i],
   Zeynep hear-PAST Hasan-GEN shrimp-ACC eat-FNOM-3.SG-ACC
   [Mehmed-in de istiridye-yi Zeynep [ t1 t2 ye-di-g-in]-i duy-du.]
'ZEYNEP heard that Hasan ate the shrimp, and (Zeynep heard that) Mehmet (ate) the oyster.'


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Johnson, Kyle (2004). In search of the English middle field. Manuscript, UMass at Amherst, MA.
This paper proposes a revision to the phase theory of Chomsky (2000, 2001, henceforth DbP) that offers parsimonious explanations of several puzzles at the interfaces between syntax, semantics, phonology, and information structure. The primary empirical puzzle revolves around observations by Bresnan (1971, 1972) and Diesing (1992), where phonological stress correlates with underlying syntactic position, dependent on Information Structure (i.e., Focus, Background, and related notions). These data find a straightforward account in the proposed theory, in which derivational phases are determined by both Information Structure and Diesing’s (1992) Mapping Hypothesis. Furthermore, this hypothesis appears to significantly simplify theories of stress assignment and information structure in general.

A phase is a sub-unit of a derivation which is sent to the PF and LF interfaces as a package. The standard assumption following DbP is that phases are defined at particular points in the phrase structure. Contra this assumption, this paper claims that the syntax generates phases at any point in the derivation, constrained only by the interfaces. That is, a phase must fulfill some interface condition in order to be licensed. Two such interface conditions are proposed: 1) Information Structure (InfoStruct) requires that Focused constituents be Spelled Out as phases, and 2) Diesing’s Mapping Hypothesis (MapHyp) requires that VP and TP be Spelled Out as phases. These conditions are necessary to provide the semantic interface with the particular units it needs for interpretation. As an important technical aside, the use of the term “phase” here refers to the unit that undergoes Spell Out, essentially the same as DbP’s “complement to a phase head.” This means that the MapHyp interface requirement produces essentially the same Spell Out domains as DbP does, with the fortunate result of leaving most previous work assuming the “standard” phases of DbP undisturbed by the present proposal.

The notion that syntactic and phonological cycles are linked (as in a phase) goes back to Bresnan (1971). She argued based on data such as (1) that stress reflects underlying syntactic position, and that stress rules and syntactic rules operate on the same cycle. Since DbP, Bresnan’s basic idea has been revived in terms of the phase (e.g., Legate 2003, Kahanmuyipour 2004, Adger 2006, and Kratzer & Selkirk 2007). However, these recent theories all have the same basic problem as Bresnan: changes in InfoStruct appear to disrupt the default pattern, as shown in (2). Interpretation of bare plurals shows a strikingly parallel pattern in (3) and (4). The overall generalization is that in “all-Focus” contexts, stress falls on the underlyingly most embedded constituent, while in “narrow Focus” contexts, it is ambiguous.

This pattern follows from the proposal that maps Focus to a phase. Following recent work, it is claimed that stress is assigned at each phase, by a version of the Nuclear Stress Rule in which the most embedded element receives stress. Once stress is assigned, it propagates throughout the derivation. In “all-Focus” contexts, InfoStruct requires that the entire sentence be a phase, but does not require any smaller phases. The result is that the most embedded element in the sentence ends up with primary stress.

In “narrow Focus” contexts, InfoStruct still requires that the Focused constituent be a phase. The difference is simply that in these cases, the Focus is smaller than the entire sentence. Primary stress is assigned to the “Focus phase” constituent, which is not necessarily the most embedded constituent in the sentence. This means that when Focus is narrow, stress is not a good predictor of overall level of embedding, because a Focus phase could be anywhere in the hierarchical structure, at any point in the derivation. In these cases, it is impossible to reconstruct based on stress whether a constituent is the raised object of a complement clause or the object of the matrix clause (as in the Bresnan data), or whether it is interpreted inside VP or base-generated outside of it (as in the bare plural data).

In addition to an elegant account of complex data, this proposal offers several interesting theoretical results. First, by linking stress to phases and making phases dependent on InfoStruct, it derives the connection between stress and Focus without stipulation. Second, it unifies stress assignment rules for “default” stress and Focus stress. The difference between the two is not a matter of different stress rules, but rather the placement of phases within the derivation. Third, it allows theories of Information Structure to do away with the complication of diacritic Focus features in the syntax, integrating more easily into the syntactic tradition of Minimalism. In conclusion, this modest extension of DbP appears to create a domino effect of improved empirical coverage and theoretical elegance.
Throughout, **SMALL CAPS** = primary stress:

(1) a. George has **PLANS** to leave. (default reading = George is leaving some plans.)
   b. George has plans to **LEAVE**. (default reading = George plans to leave.)

(2) a. **All-Focus (non-contrastive), easily fits (1a) reading**
   Speaker A: How can we build a car without any directions?
   Speaker B: Don’t worry! [*Focus George has **PLANS** to leave.*] We can use those to figure out what to do.
   b. **All-Focus (non-contrastive), very hard or impossible to get the (1b) reading**
   A: Are you coming?
   B: ?? Well, I can’t go anywhere until [*Focus George has plans to **LEAVE**.*] He’s my ride.
   c. **All-Focus (non-contrastive), very hard or impossible to get the (1a) reading**
   A: How can we build a car without any directions?
   B: ?? Don’t worry! [*Focus George has plans to **LEAVE**.*] We can use those to figure out what to do.
   d. **All-Focus (non-contrastive), easily fits (1b) reading**
   A: Are you coming?
   B: Well, I can’t go anywhere until [*focus George has plans to **LEAVE**.*] He’s my ride.
   
   e. **Examples e-h: Narrow Focus, ambiguous for both readings**
   A: I think George is leaving now.
   B: No, *George has [focus **PLANS**] to leave*, but I doubt he will.
   f. A: I think George is going to leave a model here.
   B: No, *George has [focus **PLANS**] to leave*; he didn’t finish the model.
   g. A: I think George has plans to stay.
   B: No, *George has plans to [focus **LEAVE**]*.
   h. A: I think George has some plans to take with him.
   B: No, *George has plans to [focus **LEAVE**]*, not take with him.

(3) a. **FIREMEN** are available. (“default” reading = existential “there are firemen available”)
   b. Firemen are **AVAILABLE**. (“default” reading = generic “firemen are typically available”)

(4) a. **All-Focus, easily fits (2a reading**
   Speaker A: What if something goes wrong?
   Speaker B: Don’t worry! [*Focus FIREMEN are available.*] You can just call them.
   b. **All-Focus, very hard or impossible to get the (2b) reading**
   A: Well, I know chefs tend to be pretty surly. What about other professions?
   B: ?? Well, [*focus FIREMEN are available.*]
   c. **All-Focus, very hard or impossible to get the (2a reading**
   A: What if something goes wrong?
   B: ?? Don’t worry! [*Focus Firemen are **AVAILABLE**.*] You can just call them.
   d. **All-Focus, easily fits (2b reading**
   A: Well, I know chefs tend to be pretty surly. What about other professions?
   B: Well, [*focus firemen are **AVAILABLE**.*]
   e. **Examples e-h: Narrow Focus, ambiguous for both readings**
   A: I’ve heard that policemen are generally available.
   B: No, not policemen! [*Focus FIREMEN] are available.
   f. A: I feel pretty safe, because I know that there are a lot of policemen available to help.
   B: No, not policemen! [*Focus FIREMEN] are available.
   g. A: Firemen are generally never around when you need them.
   B: That’s nonsense! *Firemen are [focus **AVAILABLE**].*
   h. A: Oh no, we have a fire in the house! It’s too bad there aren’t any firemen around!
   B: What are you talking about? *Firemen are [focus **AVAILABLE**].* Just call them.
Gradual Learning and Faithfulness: Consequences of Ranked vs. Weighted Constraints
Karen Jesney¹ & Anne-Michelle Tessier² – ¹UMass Amherst & ²University of Alberta

Overview
This paper investigates a class of stages in L1 phonological acquisition where children faithfully produce marked structures only in privileged positions. The first half of the talk presents one such stage, referred to here as an Intermediate Faith (IF) stage, using data from the acquisition of Hebrew reported by Bat-El (2007). This particular pattern is a novel addition to the typology of recognized IF stages, as its privileged domain is defined morphologically (noun vs. non-noun), rather than prosodically. The second half of the talk addresses how a gradual, on-line learner can be induced to pass through IF stages, and compares how grammars using ranked vs. weighted constraints fare at this learning task.

Data
The Hebrew pattern discussed in this paper involves syllable truncation in words with final stress (for other IF stages, see Goad & Rose 2004; Revithiadou & Tzakosta 2004; Tessier 2007 and references therein). Previous longitudinal work on the acquisition of Hebrew (Ben-David 2001, Adam 2002) has documented an initial stage where all finally-stressed targets are reduced to a single monosyllable (/...wS/ → [S]), and a later stage where these same forms are reduced to a disyllable (/...wS/ → [wS]). Bat-El (2007), however, reports a truncation stage for one child where finally-stressed verbs and nouns pattern separately; verbs are reduced to monosyllables and nouns are reduced to disyllables (see data in 1). This stage is re-analyzed here as an IF grammar which is preferentially faithful to nouns over verbs. The analysis relies on two faithfulness constraints: MAX-, a general constraint against syllable deletion, and MAX-σ-NOUN, its noun-specific counterpart (see Smith 2001). In addition to unviolated Markedness constraints demanding that words contain exactly and only one foot (see e.g., Fikkert 1994, Pater 1997), this IF grammar shows the differential effect of the markedness constraint TROCHEE. In verbs, TROCHEE is enforced, ensuring that outputs contain a single trochaic foot; finally-stressed verbs are thus realized as monosyllables (/...wS/VERB → [S]). In nouns, on the other hand, the pressure of MAX-σ-NOUN overrides TROCHEE, allowing an iambic foot that retains an additional syllable to surface (/...wS/NOUN → [wS]).

Learning with the GLA
To study the conditions under which a learner might establish an IF grammar, we adopt the Gradual Learning Algorithm (GLA: Boersma 1998, Boersma & Hayes 2001). GLA learning is driven by errors – i.e., mismatches between observed outputs in the ambient language and the learner’s current outputs. In response to each error, the GLA increases the value of constraints that prefer the target output and decreases the value of constraints that prefer the learner’s output. We also assume an initial state in which Markedness >> Faithfulness (Demuth 1995, Gnanadesikan 2004, Smolensky 1996).

GLA learning with ranked constraints
The GLA works with any grammar where the constraints can be assigned numerical values. The standard GLA approach learns an Optimality Theoretic grammar (Prince & Smolensky 1993/2004), with numerical constraint values translated into a strict-domination constraint hierarchy on each iteration of EVAL. As we review, a GLA learner increases the values of general faithfulness constraints faster than those of more specific faithfulness constraints (see Hayes & Londe 2006 fn 28; Tessier 2007). This means that the OT-GLA learner will not pass through an IF stage where the specific MAX-σ-NOUN constraint outranks TROCHEE and TROCHEE outranks general MAX-σ (see 2, 3). One possible solution is to impose an innate SpecificFaith >> GeneralFaith ranking bias (Smith 2000; Hayes 2004; Tessier 2006), but implementation of this bias is notoriously difficult (Prince & Tesar 2004).

GLA learning with weighted constraints
Harmonic Grammar (HG: Legendre et al. 1990; Smolensky & Legendre 2006; see also Pater, Potts and Bhatt 2006) provides a constraint-based alternative to OT, with the crucial difference that in HG constraints are weighted rather than ranked. Constraint interaction is linear and additive; optima are selected by comparing the summed weighted violations of each candidate. Unlike an OT-GLA learner, an HG-GLA learner readily passes through an IF stage. As shown in (4), the IF stage arises when TROCHEE outweighs MAX-σ, driving truncation to a monosyllable in verbs, but the combined weights of MAX-σ-NOUN and general MAX-σ “gang up” to overcome TROCHEE and protect the penultimate syllable in nouns. This IF stage emerges without any need for an innate SpecificFaith bias or for the computation of specific/general relationships among constraints – a significant advantage over the OT-GLA approach. These results highlight the predictions that alternative approaches to constraint interaction make for L1 acquisition, and offer novel evidence in favour of a weighted mode of EVAL.

a. Finally-stressed verbs truncated to final monosyllable: /...wS/ → [S]
Finally-stressed nouns truncated to final disyllable: /...wS/ → [wS]

<table>
<thead>
<tr>
<th>Age Range (data from one child)</th>
<th>Nouns /...wS/ targets</th>
<th>poly-σ outputs</th>
<th>% poly-σ outputs</th>
<th>Verbs /...wS/ targets</th>
<th>poly-σ outputs</th>
<th>% poly-σ outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:02.00-1:03.05</td>
<td>10</td>
<td>3</td>
<td>30%</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1:03.14-1:05.14</td>
<td>45</td>
<td>32</td>
<td>71%</td>
<td>6</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>1:05.08-1:07.02</td>
<td>244</td>
<td>187</td>
<td>77%</td>
<td>44</td>
<td>22</td>
<td>50%</td>
</tr>
<tr>
<td>1:07.09-1:09.00</td>
<td>346</td>
<td>296</td>
<td>86%</td>
<td>114</td>
<td>81</td>
<td>71%</td>
</tr>
</tbody>
</table>

b. Nouns Verbs Age Range (data from one child) /...wS/ targets poly-σ outputs % poly-σ outputs /...wS/ targets poly-σ outputs % poly-σ outputs
1;02.00-1;03.05 10 3 30% -- -- --
1;03.14-1;05.14 45 32 71% 6 0 0%
1;05.08-1;07.02 244 187 77% 44 22 50%
1;07.09-1;09.00 346 296 86% 114 81 71%

c. Nouns Verbs Age input /...wS/ output [wS] gloss input /...wS/ output [S] gloss
1;05.04 bak.'buk buk.'buk ‘bottle’ maf.'pric 'pic ‘squirt’
1;05.08 ar.'ye a.'ye ‘lion’ ho.'rid 'yit ‘put down’
1;06.12 suf.gan.'ya in.'ya ‘donut’ ko.'fec 'fec ‘jump’
1;06.20 liv.ya.'tan i.'tan ‘crocodile’ na.'fal 'fal ‘fall’

(2) Via errors, General Faith (MAX-σ) is promoted more quickly than Specific Faith (MAX-σ-NOUN)

Promotion of MAX-σ triggered by inputs /...sW/VERB and /...sW/NOUN
Promotion of MAX-σ-NOUN triggered by input /...sW/NOUN only
Value of MAX-σ is increased more quickly

(3) An OT-GLA learner does not pass through the Hebrew IF stage in (1)

Stage Rankings Output for /...wS/VERB Output for /...wS/NOUN
initial: TROCHEE (=100) >> MAX-σ (=20), MAX-σ-NOUN (=20) [S] [S]
not IF: TROCHEE (=70) >> MAX-σ (=50) >> MAX-σ-NOUN (=35) [S] [S]
final: MAX-σ (=70) >> TROCHEE (=50) >> MAX-σ-NOUN (=45) [wS] [wS]

(4) An HG-GLA learner does pass through the Hebrew IF stage in (1) – same constraint values as in (3)

Stage Weights and inequalities /...wS/VERB /...wS/NOUN
initial: wTROCH (=100) > wMAX-σ (=20) + wMAX-σ-NOUN (=20) [S] [S]
IF: wMAX-σ (=50) + wMAX-σ-NOUN (=35) > wTROCH (=70) [S] [wS]
final: wMAX-σ (=70) > TROCHEE (=50) [wS] [wS]

Selected References:
Smith, Jennifer. 2001. Lexical category and phonological contrast. [ROA-728]
This paper presents a novel set of pronoun binding data that leads us to propose a fundamental change to the rules governing the locality of binding.

Data & Dilemma: Several researchers (Fox, 2000; Büring, 2005b, inter alia) have argued that pronouns must be bound to the structurally closest binder when given a choice, that is, structure (1a) is preferred to (and hence blocks) structure (1b). (Here \( \beta_n \) is the binder prefix of Büring (2005a), defined as in (2).) This claim is motivated by missing readings cases in VP-ellipsis (Dahl, 1974): The target clause of example (3) has only three of the four readings expected on a naïve analysis, missing the ‘mixed’ reading in which Bill said that John (strict) loves Bill’s (sloppy) children.

In this paper we show that this principle must be generalized, based on previously unacknowledged examples like (4). Suppose a context in which Mary has married twice. Whereas she has no kids of her own, both men she has been married to — John and Bill — have children from previous marriages. In this context, sentence (4) likewise has only three readings for the target clause, missing reading (4d), according to which Bill told Sue that John and Sue (strict) should love Bill’s (sloppy) children.

The fact that this example parallels the Dahl example (3) is surprising given that it would seem that only John (and in particular, not they) is a suitable antecedent for his. Yet ruling out the missing reading requires that his be locally dependent on they rather than (the more distant) John, despite the fact that his and they merely overlap in reference. Existing analyses of (3) thus fail to carry over to (4).

Proposal: We propose that the correct structure for the antecedent in (4) is (5a), which in turn blocks (5b). On both construals, John and Mary partially bind they (as independently motivated in Schlenker, 2005; Rullman, 2004; Büring, 2005a, ch.7). In (5a), his is an e-type pronoun of the form the \( f(x) \), where \( x \) is bound by they and \( f \) is a contextually provided function that maps any plurality to the set of males in it. (5a) can thus be paraphrased (if awkwardly) as in (6). We will say that they, while not binding his, REFERENTIALLY DETERMINES his. As argued above, this dependence should suffice to block the DIRECT BINDING of his by John in (5b), in which his functions as a plain bound variable. The existence of e-type structures like (5a) is independently confirmed by sentences like (7a-b), which both have sloppy readings for her despite the lack of a licit binding configuration involving a singular antecedent. It follows that similar examples that involve VP-ellipsis – such as (8), in which his is an e-type pronoun that can be paraphrased as the rabbi who married them – should exhibit the expected pattern of missing readings, which is in fact the case.

Taken together, these data suggest the generalization of Fox’s proposal (9) shown in (10). While (10) subsumes (9) – direct binding is a sub-case of referential dependency – it also requires that a locally referentially-determined e-type pronoun is preferred over a less locally bound variable in the same way that a bound variable is so constrained. The parallelism between examples (3) and (4) is hence captured: If they in (4) is interpreted strictly, then his will corefer with John even when interpreted ‘sloppily’, due to its being referentially determined by they (see again Fox, 2000; Büring, 2005b, for details).
(1) a. NP $\beta_2 \ldots \text{pron}_2 \beta_3 \ldots \text{pron}_3$
b. NP $\beta_2 \ldots \text{pron}_2 \ldots \text{pron}_3$

(2) $[\beta_1 X]^g = \lambda x. [X]^{g[i\rightarrow x]}(x)$

(3) John said that he loves his children, and Bill did too.

(4) John told Mary that they should love his children, and Bill did too.
   a. Bill told Mary that John and Mary should love John’s children.
   b. Bill told Mary that Bill and Mary should love Bill’s children.
   c. Bill told Mary that Bill and Mary should love John’s children.
   d. # Bill told Mary that John and Mary should love Bill’s children.

(5) a. John $\beta_1$ told Mary $\beta_2$ that they$_{1,2}$ $\beta_3$ should love [ the $f(x_3)$’s ] children
   b. John $\beta_1$ told Mary $\beta_2$ that they$_{1,2}$ should love his$_1$ children

(6) John told Mary that they should love the male among them’s children.

(7) a. (Virtually all couples agreed that the woman is no less representative of the household than the man.) Yet, while the Joneses have her name on the lease, none of the other couples do.
   b. According to John and his wife, only they were ok with her former husband attending their wedding.

(8) (Most people feel strongly about the importance of the rabbi at a wedding.) Indeed, the Snyders think that they should put his name on their invitation, and so do the Snodgrasses.

(9) Rule H (cf. Fox, 2000)
   A pronoun, $\gamma$ can be bound by an antecedent, $\alpha$, only if there is no closer antecedent, $\phi$, such $\gamma$ can be bound to $\phi$ and get the same semantic interpretation.

(10) Be Locally Determined!
   A pronoun, $\gamma$ can be bound by an antecedent, $\alpha$, only if there is no closer NP, $\phi$, such that $\gamma$ can be referentially dependent on $\phi$ and get the same semantic interpretation.

References


Focus Realization: Not by Focus-to-Accent but by Prosodic Structure

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Focus is a discourse function to connect a sentence to context. To perform this function, focus represents its cue in PF. Even though the way of focus representation is language specific, it is generally accepted that focused element is prominent. We call this prominence in PF accent. “How focus is conveyed by accent’ will be discussed in this paper. There has been a controversial issue in Focus to Accent theory (FTA); whether whatever focused is accented and in the other way around whatever accented is focused. Some argued that focus is straightforwardly reflected as accent and others argued that in the case of broad focus, sentence structure is dominant to accent. This controversy has usually been for broad focus but not for narrow focus. For narrow focus, it seemed to be quite straightforward that it is directly reflected in accent. In English, when even a smaller element than a word like a morpheme, gets narrow focused, it gets its own accent. However, I will show that narrow focus is sensitive to prosodic structure in this paper.

South Kyungsang Korean (SKK) exhibits restricted pattern of lexical tonal distinction. I assume that it is lexically assigned of pitch accent and post-lexically assigned of edge tones. From the observation of pitch tracks of sentences that have contrastive focus compared to a neutral one, we can tell three prosodic effects of focus; first, it expands the pitch range of the focused word, second, it changes phrasing by beginning a new ip and third, it suppresses the pitch range of the followings within the same ip. What we will concentrate on here is the first point. In English, which is a stress language, accent by focus means increase of intensity and assignment of a certain type of pitch accent. However, in SKK, which has already lexical pitch accent, cannot be assigned of a new pitch accent, instead it increases the pitch range of the pitch accent. However, not every word can have a pitch accent because of the restriction that an Accentual Phrase (AP) can have at most one pitch accent having one or more Prosodic Words (PW). If a word that does not have a pitch accent gets focused, a question how that focus is cued in PF rises. The prosodic effect by focus affects the word that has pitch accent within the same AP domain with the focused word.

The focus in SKK demonstrates that focus in prosody works in prosodic domain but does not have straightforward focus to accent relationship. In pitch range expansion, its domain is AP. In phrasing, focus could look into AP and could separate one AP into two. In post-focus pitch suppression, the suppression applies from the post-focus AP and it ends in the ip boundary as you can see in the f0 tracks. This is one good way to see how focus is conveyed in prosody. The Focus to Accent realization in a stressless pitch accent language, SKK, has been done through pitch range expansion of a lexical pitch accent and this is done by prosodic domain but not by one-to-one relation.
The distribution of clitics in Greek restrictive relatives has been a long-standing puzzle in the literature (cf. Theophanopoulou-Kontou 1985; Efthimiou 1997; Alexiadou & Anagnostopoulou 2000; Kotzoglou & Varlokosta 2005; Alexopoulou 2006, among others). In most cases, the discussion focuses either on the asymmetry in the distribution of resumptives in restrictive vs. appositive relatives (resumptives are obligatory in the latter, but not in the former, see (1)), or on the curious pattern of resumption in restrictive relative clauses (RRCs): resumptives seem to be obligatory in RRCs with an IO-dependency but not in RRCs with a DO-dependency (2). Furthermore, their presence in relatives with a DO-dependency seems to be regulated by the definiteness of the relative head: clitics are tolerated when the head is indefinite, but not when the head is definite (3).

In this paper, however, we show that contrary to previous assumptions, resumptives are not always banned from RRCs with a definite head; they may be tolerated in RRCs with a DO dependency provided that the relative head is D-linked/presupposed (4).

Based on a number of empirical counterarguments to the raising analysis (cf. Borsley 1997) on the one hand and on the existence of reconstruction effects (5) on the other, we adopt a matching approach to relativization (Sauerland 1998) over the operator and raising analyses. We argue, therefore, that a full DP raises to [Spec, CP] of the subordinate clause and matches a corresponding DP in the main clause. PF-rules see that only the hierarchically higher phrase (among the matching ones) gets pronounced at Spell-out.

This analysis allows us to offer an explanation of the distribution of resumptives in RRCs in Greek. The asymmetry between DO-RRCs that allow a clitic and DO-RRCs that do not is due to movement: resumptives are tolerated when the relative DP is D-linked/base generated on the left periphery of the clause (in which case they unselectively bind a pro in the θ-position, cf. Pesetsky 1987), but they are banned when the relative DP undergoes movement from its vP-internal position to the relativization site (6).

The pattern that emerges is a well-known one in the literature on A’-dependencies. While a clitic cannot be coindexed with an element moved to an A’-position (cf. wh-movement (7), focusing (8)), it can be coindexed with an element base generated in an A’-position (cf. CLLD (9)).

We explain this asymmetry by resorting to the Restriction on Copy Reduction (RCR) (Kotzoglou 2005). According to the RCR, phonological deletion of movement copies (cf. Nunes 1999) applies not to chains, but to pairs of copies of a linguistic element. So, at the phase level, PF examines all possible pairs of copies of an element and one of the members of each pair is phonologically silenced. However, as shown in (10), this leads to conflicting instructions to PF in the cases where more than two copies of a given element are ‘active’ within a single phase (in other words, PF gets conflicting instructions as to whether to pronounce or silence the copy a2 in (10)). If we now assume that the resumptive clitic in (6b) behaves as a copy of the moved element, then a violation of the RCR ensues, since two copies of the moved relative-DP (one in [Spec, vP] and one in [Spec, CP]) plus the clitic are present in the CP-phase. On the other hand, D-linked relative DPs are not moved to [Spec, CP], but they unselectively bind an argumental pro. Therefore, in their case there is no [Spec, vP] copy and no violation of the RCR arises.

This account provides an explanation for the distribution of resumptive clitics in Greek DO-RRCs, by treating the asymmetry in tandem with similar constructions (7-8), whose main characteristic is also the prohibition on the presence of a clitic coindexed with an A’-moved constituent (Accordingly, instances of licit resumption in DO-RRCs with D-linked relative heads are parallel to cases of CLLD, such as (9)).


Examples:
(1a) i sofia diavase ena vivlio pu (to) epenesan poli the Sofia read a book that it praised many ‘Sofia read a book that many people praised.’
(1b) i sofia eghrapse ena vivlio, pu *(to) epenesan poli the Sofia wrote a book, which was praised by many people.’
(2a) ghnorisa mia kopela pu *(tis) ichan klepsi ton ipologhisti met1sg a girl that *(her) had3pl stolen the computer ‘I met a girl whose computer they had stolen.’
(2b) ghnorisa mia kopela pu (tin) ichan eksekisi proedhro met1sg a girl that (her) had3pl elected president ‘I met a girl that they had elected as a president.’
(3a) ta pedhja ixan vri mia kripsona pu i ghnis tus the children had found a hiding-place that the parents their dhen tin ixan anakalipsi not it had discovered ‘The children had found a hiding place that their parents had not discovered.’
(3b) ghnorisa tin kopela pu *(tis) ixe kalesi o janis sti jorti tu met1sg the girl that *(her) had1sg invited the John at party his ‘I met the girl that John had invited to his party.’
(4) pjon mathiti tis irinis su sistisan? mu sistisan to mathiti tis irinis which student the Irene_gen you_gen introduced3pl? me_gen introduced the student the Irene_gen pu (ton) epenesan stin akadhimia that (him) praised3pl in-the academy ‘Which of Irene's students did they introduce to you? They introduced to me the student of Irene’s that they praised in the Academy.’
(5) *thimame to [filo tu jorhu]i pu dhen pro, ekitimuse t j remember1sg the friend the George_gen that not pro respect3sg t ‘I remember George's friend that he didn't respect.’
(6a) [CP D-linked-DPi … resumptive clitic, … [vP … pro,]]
(6b) *[CP DPi … resumptive clitic, … [vP ti…]]
(7) *pjon, ton, idhes? whom him saw2sg ‘Whom did you see?’
(8) *[TON PETRO], ton, idha The Peter him saw1sg ‘I saw Peter.’
(9) [ton filo tu niku me ta makria malia], ton, idha sto sinema the friend the Nick with the long hair him saw1sg in-the cinema ‘I saw Nick’s friend with the long hair in the cinema.’
(10a) **Restriction on Copy Reduction (RCR)** (phonological deletion of copies under identity) can apply to at most one pair of copies of an element in each phase.
(10b) Assume phase A [\textsubscript{\textsuperscript{\text{phaseA}}} a1 . . . a2 [\textsubscript{\text{phaseB}} a3 ]] and a1, a2, a3 copies of the same constituent (in the sense of Nunes 1999) (with a3 on the edge of the lower Phase B, still visible to Phase A) Phonological deletion gives, let us say, the following results:
(i) <a1, a2> → <a1, a2> (phonological deletion of a2 – pronunciation of a1)
(ii) <a1, a3> → <a1, a3> (phonological deletion of a3 – pronunciation of a1)
(iii) <a2, a3> → <a2, a3> (phonological deletion of a3 – pronunciation of a2) *(i) and (iii) give conflicting instructions to PF
Implicit Arguments Are Syntactic

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The prevalent view on implicit arguments takes them to be unprojected θ-roles, absent from syntactic representation (see, among others, Williams 1985, 1987, Chomsky 1986, Rizzi 1986, Roeper 1987). Thus, they are invisible to secondary predicates (1), unlike PRO (2), which is syntactically present. At the same time, it is well-known that implicit arguments can control; in each example in (3), PRO is controlled by the internal argument of the matrix predicate, whether overt or not. The notion that a syntactic relation, like control, can be mediated by nonsyntactic entities, like implicit arguments, is problematic. Conversely, if implicit arguments are syntactic, then the ungrammaticality of the starred examples in (1) is puzzling.

I will present an argument that implicit arguments, contrary to common belief, are present in the syntax insofar as they control. However, their syntactic constitution is more impoverished than that of the standard null categories (pro, PRO), explaining their reduced visibility to syntactic processes.

The argument proceeds in six steps, as summarized below.

(A) i. Lexical relations are confined to argument structures. Thus, if a lexical relation R relates x and y (xRy), then either x is an argument of y, or y an argument of x, or they are coarguments.
ii. If Obligatory Control (OC) is a lexical relation, it reduces to predication.
iii. Partial Control (PC) is a species of OC, and it is irreducible to predication.
iv. Hence, PC is not a lexical relation (namely, it is a syntactic relation).
v. Implicit arguments can function as partial controllers.
vi. Therefore, implicit arguments are syntactic.

(i) expresses a deeply rooted assumption within most strands of generative grammar; essentially, it implies that long-distance dependencies must be handled by the syntax. Given (i), a direct relation between the controller DP and PRO in OC falls outside of the lexicon, since they are neither coarguments nor predicate-argument. A lexical analysis can comply with (i) only by taking OC to be a relation between the entire complement infinitive and the controller DP; but such a relation can only be predication (e.g., Chierchia 1984), hence (ii).

That PC is a species of OC is well-established (Landau 2000). For example, the local controller cannot be “skipped”, sloppy reading is forced under VP-ellipsis, etc. (4). Yet PC clearly cannot be captured by any standard predicational analysis of OC, since a collective predicate cannot be sensibly predicated of a singular DP (5), hence (iii). From (ii) and (iii) follows (iv).

To demonstrate (v), we use complements of psych-adjectives, which fall under OC (Landau 2000). Normally, the internal experiencer argument of these adjectives, serving as the controller, is optional (6a). In the context of find it Adj, however, it must remain implicit, and necessarily anaphoric to the matrix subject (6b). Crucially, this implicit argument, when identified by a singular antecedent, can exercise partial control (7) (the position of the implicit argument is underlined and indexed), hence (v). (iv) and (v) yield (vi), given that only syntactic entities can participate in syntactic relations. This removes the anomaly of allegedly nonsyntactic entities playing an active role in the syntax (i.e., in control).

If implicit arguments are syntactic, why do they fail to saturate secondary predicates (see (1)), unlike PRO and pro? I suggest a minimal difference: pro/PRO consist of the features [D,ϕ-set], implicit arguments only consist of a ϕ-set. The lack of a D feature makes implicit arguments “invisible” to predication, since syntactic argumenthood is anchored in D. It also explains their inability to bind anaphors (8), another curious asymmetry with PRO/pro (Rizzi
1986). Following Reuland 2001, we take anaphoric binding to reduce either to checking of a D feature (SE-binding) or to secondary predication (by the SELF predicate). Again, lack of D excludes implicit arguments from these relations.

(1) a. Somebody left the room angry / *The room was left angry.
   b. He ate something raw / *He ate raw.

(2) a. [PRO leaving the room angry] is typical of Jim.
   b. The meat was too chewy [PRO to be eaten raw].

(3) a. Mr. Jones helped (the kids) [PRO to clean the garden].
   b. Martha signaled (to Kevin) [PRO to stay away from the slope].
   c. Paul said/shouted (to his son) [PRO to open the door at once].
   d. It was amusing (to Fred) [PRO to watch the worm parade].

(4) a. John said that Mary₁ agreed [PRO₁ to work together on the project].
   (“PRO” must include Mary).
   b. Mary complained that John agreed to meet only after Bill did.
      (only sloppy: after Bill₁ agreed that he₁ himself would meet, possibly with Mary)

(5) a. * Mary worked together on the project.
   b. * John met after dinner.

(6) a. It was amusing/annoying/embarrassing (to John) to listen to that speech.
   b. John found it amusing/annoying/embarrassing (*to him) to listen to that speech.

(7) a. Mary found it exciting __₁ [PRO₁ to meet on top of the Empire State Building].
   b. The chair found it frustrating __₁ [PRO₁ to gather without a concrete agenda].
   c. Rachel found it embarrassing __₁ [PRO₁ to kiss in public].

(8) a. [Bill and Kevin], anticipated that John would talk (to them₁) about himself.
   a. [Bill and Kevin], anticipated that John would talk *(to them₁) about each other₁.

References

Phonotactics

With the notation in (1), a typology \( \mathcal{T}_\Theta \) is a set of grammars \( G_\theta : \mathcal{X} \rightarrow \mathcal{Y} \) parameterized by the parameter \( \theta \in \Theta \): if \( \Theta \) is the set of hierarchies on \( \mathcal{C} \), \( \mathcal{T}_\Theta \) is a standard OT typology; if \( \Theta \) is the set of weight vectors for \( \mathcal{C} \), \( \mathcal{T}_\Theta \) is a linear OT typology. The basic learning problem (BLP) is (2): the input is a typology \( \mathcal{T}_\Theta \) and a set \( S \) of surface forms, as in (2a); the output is a grammar in \( \mathcal{T}_\Theta \) which accounts for \( S \), as in (2b). The subset learning problem (SLP) is (3), namely the BLP with the additional requirement (3b.ii) that the output grammar is strictest among those which account for the set of surface forms \( S \). The SLP is Hayes’ formalization of the acquisition of phonotactics by an 8-to-10 month old.

The SLP is hard in standard OT

Tesar’s Constraint Demotion (CD) solves the BLP. Hayes (2004) points out that building into CD the intuitive ranking heuristic (4a) is not enough to solve the SLP: the resulting algorithm fails e.g. in the case of voicing and aspiration in Korean. Thus, he introduces the further heuristics (4b) and (4c) and shows that they suffice to get Korean right. Prince & Tesar (2004) question (4b). I provide a counterexample against (4c): given the Azba-typology in (5a) (from Prince & Tesar) and the surface forms \( S \) in (5b), Hayes’ algorithm fails to return the smallest language.

The SLP is easy in linear OT

Each surface form \( y \in S \) can be considered as its corresponding fully faithful underlying form. The set of surface forms \( S \) can thus be paired with the set of vectors \( \text{Vect}(S) \) defined in (6c), using the notation in (6a) and (6b). The BLP within linear OT can then be restated as follows: given \( S \), find a weight vector \( w \) which minimizes the loss function \( \text{Loss}_{BLP} \) in (7), where \( \text{sign} \) is the sign function and “\( \cdot \)” is the Euclidean dot product. Consider now the single heuristic (4a) and note that it can be restated as follows: minimize \( \|w^F\|^2 \), where \( w^F \) is as in (6d) and \( \| \cdot \| \) is the Euclidean norm. The SLP within linear OT can then be restated as follows: given \( S \), find a weight vector \( w \) which minimizes \( \text{Loss}_{SLP} \) in (8). Boersma’s Gradual Learning Algorithm (GLA) can be restated within linear OT as the iterative algorithm (9). Consider the algorithm (10), namely (9) without \( \text{sign} \): (10) is Stochastic Gradient Descent (SGD) for the minimization of a function which is as \( \text{Loss}_{BLP} \) in (7) but without \( \text{sign} \). This suggests to tackle the SLP as follows. Consider a function which is exactly as \( \text{Loss}_{SLP} \) in (8) but without \( \text{sign} \). It too can be minimized through SGD, namely the algorithm (11). We might thus try to minimize the original loss (8) by means of the variant of (11) with \( \text{sign} \) back into place, namely (12). Note that (12) is as the original GLA in (9) but with the additional regularization term \( \eta \lambda w^F_t \). I present MATLAB simulations to show that this regularized GLA (12) gets right both Hayes’ Korean case and the case in (5), together with some more cases in Prince & Tesar (2004).

Conclusion

The SLP is an optimization problem. Standard OT takes the parameterization \( \Theta \) to be very small and thus discrete, i.e. the set of hierarchies. Thus, the SLP becomes a discrete optimization problem. But discrete optimization problems are known to be tough and only amenable to approximate heuristics which fail in the general case, as (4b) and (4c). Linear OT takes the parameterization \( \Theta \) to be much bigger and continuous, i.e. the set of weight vectors. Thus, the SLP becomes a continuous optimization problem, which is much easier, and the single intuitive heuristic (4a) suffices, formalized as a regularization bias. This conclusion contradicts the classical intuition of generative linguistics that standard OT was built on, namely that the smaller the parameterization \( \Theta \), the easier the learning task.
(1) **Notation**
a. \( \mathcal{X} \) is the set of underlying forms.
b. \( \mathcal{Y} \) is the set of surface forms.
c. \( \text{Gen} : x \in \mathcal{X} \mapsto \text{Gen}(x) \subseteq \mathcal{Y} \) is the generating function.
d. \( \text{Con} \) is the set of \( k \) constraints \( C_1, \ldots, C_k \).
e. \( \Theta \) is the set of parameters \( \theta \) (hierarchies, weight vectors, etc.).

(2) **BLP**
a. input: \( T_\theta \) and \( S \subseteq \mathcal{Y} \).
b. output: a parameter \( \theta \) s.t. 
   \[ S \subseteq \text{Range}(G_\theta). \]

(3) **SLP**
a. input: \( T_\theta \) and \( S \subseteq \mathcal{Y} \).
b. output: a parameter \( \theta \) s.t. 
   \[ i.S \subseteq \text{Range}(G_\theta); \]
   \[ \text{ii.there is no } \theta' \text{ s.t. } S \subseteq \text{Range}(G_{\theta'}) \subset \text{Range}(G_\theta). \]

(4) **Hayes’ (2004) ranking heuristics**
a. Rank markedness above faithfulness constraints whenever possible.
b. Rank specific above general faithfulness constraints whenever possible.
c. Rank autonomous above non-autonomous constraints whenever possible.

(5) **A counterexample against Hayes’ (2004) ranking heuristics**
a. \( \mathcal{X} = \mathcal{Y} = \{ \text{pa, ba, ap, ab, apsa, apza, absa, abza,} \}
   \{ \text{sa, za, as, az, aspa, azpa, asba, azba} \} \)
b. \( \text{Con} = \{ \text{IDENT[STOP-VOICE][ONSET]} \}
   \{ \text{IDENT[FRICATIVE-VOICE][ONSET]} \}
   \{ \text{IDENT[STOP-VOICE]} \}
   \{ \text{IDENT[FRICATIVE-VOICE]} \}
   \{ \text{AGREE[VOICE]} \}
   \{ \text{+[STOP-VOICE]} \}
   \{ \text{+[FRICATIVE-VOICE]} \} \}
   \{ \text{pa, ba, ap, ab, apsa, abza,} \}
   \{ \text{sa, za, as, az, aspa, azpa, asba, azba} \} \}

(6) **More notation**
a. \( C_i(x, y) \) is the \# of violations incurred by \( x \in \mathcal{X} \) and \( y \in \mathcal{Y} \) wrt constraint \( C_i \).
b. \( C(x, y) \) is the vector whose \( i \)th component is \( C_i(x, y) \).
c. \( \text{ Vect}(S) = \{ C(y, z) - C(y, y) \mid y \in S, z \in \text{Gen}(y) \} \).
d. \( w^F \) is vector \( w \) with the components relative to markedness constraints set to 0.

(7) **The BLP loss**
\[
\text{Loss}_{\text{BLP}}(w) = \frac{1}{2} \sum_{c \in \text{Vect}(S)} (1 - \text{sign}(c \cdot w))^2.
\]

(8) **The SLP-loss**
\[
\text{Loss}_{\text{SLP}}(w) = \frac{1}{2} \sum_{c \in \text{Vect}(S)} (1 - \text{sign}(c \cdot w))^2 + \frac{1}{2} \lambda \|w^F\|^2, \text{ for some } \lambda > 0.
\]

(9) **The GLA for linear classification**
\[ w_{t+1} = w_t - \eta \left( 1 - \text{sign}(c_t \cdot w) \right) c_t, \text{ where } c_t \text{ is a sequence of vectors in } \text{Vect}(S). \]

(10) **The GLA for linear regression**
\[ w_{t+1} = w_t - \eta \left( 1 - c_t \cdot w \right) c_t, \text{ where } c_t \text{ is a sequence of vectors in } \text{Vect}(S). \]

(11) **The regularized GLA for linear regression**
\[ w_{t+1} = w_t - \eta \left( 1 - c_t \cdot w \right) c_t + \lambda w^F_t, \text{ where } c_t \text{ is a sequence of vectors in } \text{Vect}(S). \]

(12) **The regularized GLA for linear classification**
\[ w_{t+1} = w_t - \eta \left( 1 - \text{sign}(c_t \cdot w) \right) c_t + \lambda w^F_t, \text{ where } c_t \text{ is a sequence of vectors in } \text{Vect}(S). \]
TWO STRATEGIES FOR COMBINING ADJECTIVES WITH INDEFINITE PRONOUNS
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Larson & Marušič (2004) provide a number of arguments showing that English adjectives combining with indefinite pronouns [=IPs], (1), are always postnominal and that the Abney (1987)/Kishimoto (2000) light N-raising analysis is not tenable. Roehrs (2006), on the other hand, convincingly shows that German (and Germanic) indefinite pronouns take only prenominal adjectives, and concludes, concerning one of Larson & Marušič’s arguments, that these constructions involve adjectives that are prenominal to a null noun in a postnominal position (Leu 2005 treats French and Swiss German cases in a similar way). Examining data from Slovenian, we show that IPs actually combine with adjectives in two different ways.

**Case difference**: Unlike in the above-mentioned Germanic languages, where IPs like ‘something’ and ‘someone’ appear to behave in the same way, the Slovenian IP nekaj ‘something’ behaves differently from the IP nekdo ‘someone’ in several ways. The first difference between the two types of IPs concerns the case of the adjectival complement. While nekdo, when nominative-marked, does not require any special case for its adjectival complement, nekaj, when nominative-marked, requires the adjective to be in the genitive, (2) (in non-nominative cases, the adjectival complement agrees with the IP in both types of IPs). Moreover, the pronoun nekaj is homophonous with the quantifier ‘some’, which also requires a complement in the genitive, e.g. nekaj snega\textsubscript{GEN}/snežink\textsubscript{GEN} ‘some snow/snowflakes’. If one assumes that the two nekaj’s are the same element, then nekaj is a quantifier that needs an NP for its restriction; this means there is a null N in the complement of nekaj in (2a). On the other hand, nekdo only has an IP use and no quantifier use (*nekdo ljudic\textsubscript{GEN} [intended ‘some men’]); since it is just a simple pronoun, not a quantifier, it offers no evidence for a null N in its complement in (2b).

**AP-internal order**: Slovenian has an alternation comparable to German where the relative order of the adjective and its complement differs between prenominal and postnominal position, (3)-(4). When the whole AP (in bold) is prenominal, the Adj (sloneč) follows its complement (na mizo), (3), when it is postnominal, the Adj precedes its complement, (4).

This alternation can be used as a diagnostic for determining the position of the adjective phrase with respect to the noun. As shown in (5) and (6), the test yields conflicting results when applied to the two kinds of Slovenian IPs. Nekaj allows both orders, (5), while nekdo allows only the postnominal order (on neutral intonation), (6). This suggests that the whole AP combining with nekdo, but not the one combining with nekaj, can only be postnominal, and that a null N approach (Roehrs 2006, Leu 2005) could only work for nekaj.

**Prenominal-only adjectives**: Slovenian possessive pronouns and possessive adjectives can only be use attributively but not predicatively, just like English possessive pronouns my, your ..., cf. *something/-one my/your. (When they occur in predicative constructions in Slovenian, they are arguably inside a noun phrase with a null N, cf. Marušič & Žaucer 2007.) And when Slovenian possessive adjectives and pronouns are used with an indefinite pronoun, the familiar difference is observed; they freely combine with nekaj, but not with nekdo, (7).

**Superlatives**: A further difference is observed with superlatives. While nekaj allows a superlative form (with an elative interpretation) in its complement, nekdo doesn’t, (8). If superlatives are always attributive (Matushansky 2004), this again suggests that adjectives combining with nekdo are always postnominal. Nekaj, on the other hand, combines with a null N which allows the superlative to be in the attributive position, giving the interpretation ‘something from among the most beautiful things’. (Cf. also Cinque 2005 for relevant discussion.) The only way to get a superlative as the complement of nekdo-type IPs is inside a PP, parallel to the English someone from among the best ones, (9).

**Conclusion**: Complementing the above facts with more evidence which shows that the typical prenominal adjectives are available with nekaj but not with nekdo, and with a further test based on the different relativization strategies employed by the two IPs (as in (10)), we conclude that Slovenian employs two mechanisms for combining adjectives with IPs, thereby making sense of the opposing claims advanced in the debate about the structure of IPs. Like German IPs, nekaj combines with an adjective that is prenominal to a null N, with the structure in (11) (cf. Roehrs 2006), and like English IPs, nekdo combines only with predicative adjectives from a reduced relative clause, (12) (Larson & Marušič 2004). (The abstract concentrates on nekaj vs. nekdo, but patterning with nekaj is also nič ‘nothing’ and mnogo ‘many’, and patterning with nekdo are also nobeden ‘noone’, en ‘someone’, etc.)
(1) a. *Something new vs. some new thing
b. *Someplace nice vs. some nice place
c. Everyone tall vs. every tall one

(2) a. nekaj velikega / *veliko

(3) a. *fant na mizo sloneč

(4) a. fant na mizo sloneč

(5) a. *nekaj slonečega na mizo

(6) a. *nekdo sloneč na mizo

(7) a. Na mizi je ležalo nekaj sosovedega. [the thing was there, but I couldn’t see what it was]

(8) a. Tole je pa nekaj najlepšega na svetu. this is something most-beautiful on world

(9) Tole je pa nekdo od najlepših na svetu. this is someone from among the most beautiful ones.

(10) a. Videli smo nekaj, kar / *ki je padlo s hruške.

(11) [DP nekaj [FP AP [NP ØN]]]

(12) [DP nekdo [RRC AP]]


Despite all the attention the semantics of comparatives has received, there seems to be no formal account of ‘metalinguistic’ comparatives such as more dumb than ugly or more a semanticist than a syntactician. This paper proposes one, built on the intuition that these structures do not compare along scales introduced by gradable adjectives—as ordinary comparatives do—but rather along a scale of (im)precision, or of how much pragmatic ‘slack’ must be afforded to judge an expression ‘close enough to true’. This is expressed by reformulating the pragmatic-halos theory of imprecision (Lasersohn 1999) in terms of a Hamblin-style alternative semantics (Hamblin 1973) in a way that allows degrees of imprecision—roughly, ‘halo size’—to be directly compared.

These ‘metalinguistic’ comparatives (the term is not ideal) differ from ordinary comparatives in a number of significant ways. The clearest of these is that they cannot be formed with -er, as the contrast between (1) and (2) shows. They can also occur with a than phrase consisting of an adjective alone, as (1) also reflects. This is not normally possible with ordinary comparatives. And unlike ordinary comparatives, these comparatives occur across a broad range of categories, as (3) reflects, where they manifest a distinct and idiosyncratic syntax. Notably, they allow comparison between adjectives with distinct scales, as (1) also shows. In ordinary comparatives, this is possible only on a comparison-of-deviation reading (Kennedy 1997), as in (4). But an example such as (4a) entails that George is dumb and Dick crazy; there is, however, no corresponding entailment in the ‘metalinguistic’ comparative in (1a), which can be true even if George is neither dumb nor crazy.

The account here is rooted in the theory of imprecision or pragmatic ‘slack’ of Lasersohn (1999), who shows in detail (as Kennedy 2007 a.o. also argues) that imprecision is distinct from truth-conditional vagueness. A predicate such as tall is vague, but six feet tall is not. However, six feet tall, though perfectly truth-conditionally precise, is normally interpreted by allowing a certain amount of leeway: we take six feet tall, when predicated of someone who is 5′11.99″, to be close enough to true, even if not absolutely true. Thus there is a ‘pragmatic halo’ around six feet tall.

To construct an account of ‘metalinguistic’ comparison, though, it is helpful to reformulate Lasersohn’s insights into a novel framework that models Lasersohnian halos using Hamblin alternatives. An expression \( \alpha \) is interpreted wrt a context \( C \) and a degree of precision \( d \), a real number in \([0–1]\). As (5) exemplifies, a predicate interpreted with maximal precision is a singleton set consisting of its core denotation. At lower levels of precision, the set expands to include other predicates of the same type, which differ only in ways that are ‘pragmatically ignorable’ in \( C \), as the denotation in (6) reflects and (7) further illustrates. Normal Hamblin-style principles of semantic composition ensure that these ‘halos’ expand in the appropriate way. Metalinguistic more can now be understood to have the denotation in (6), which requires that the maximum precision level at which there is among the alternatives to \( \alpha \) a property true of \( x \) be greater than the corresponding maximum for \( \beta \). This resembles standard denotations for ordinary more, but it is appropriately syntactically cross-categorial. It also correctly predicts that neither of the compared predicates need necessarily be true of the subject, so long as the first is ‘closer to’ being true or perfectly precise than the second.

On this view, these comparatives aren’t ‘metalinguistic’ in any extragrammatical sense, as may also be the case for metalinguistic negation (Potts 2007). Thus this advances a broader grammatical understanding of ‘metalinguistic’ phenomena. Moreover, the model of imprecision this relies on may shed further light on the semantic role of alternatives, adding to the increasing inventory of domains in which they may be implicated (Hamblin 1973), focus (Rooth 1985), pronouns (Kratzer & Shimoyama 2002), disjunction (Alonso-Ovalle 2006), scalar implicatures (Keshet 2006), and no doubt others. Finally, it may help clarify the sometimes slippery distinction between vagueness and imprecision with a novel conception of ‘halos’, and with the hypothesis that ordinary comparatives manipulate degrees at the former level, and metalinguistic ones at the latter.
Examples

(1)  
 a. George is more dumb than crazy.
 b. Dick is more crazy than dumb.

(2)  
 a. *George is dumber than crazy.
 b. *Dick is crazier than dumb.

(3)  
 a. A chimp is more \([DP \text{ an ape}] \text{ than } [DP \text{ a monkey}]\).
 b. I am more \([NP \text{ machine}] \text{ now than } [NP \text{ man}]\). (attested, Darth Vader, mid-'80s)
 c. George is more \([AP \text{ afraid of Dick}] \text{ than } [PP \text{ in love with him}]\).
 d. George more \([VP \text{ felt the answer}] \text{ than } [VP \text{ knew it}]\).

(4)  
 a. George is dumber than Dick is crazy.
 b. Dick is crazier than George is dumb.

(5)  
 for every context \(C\):  
\[
[dumb]^{1,C} = \{\lambda x \lambda w[x \text{ is dumb in } w]\}
\]
\[
[dumb]^{0,C} = D_{(e, st)}
\]

(6)  
\[
[dumb]^{d,C} = \{f_{(e, st)} : f \approx_{d,C} \lambda x \lambda w[x \text{ is dumb in } w]\}
\]

where \(\alpha \approx_{d,C} \beta\) indicates \(\alpha\) resembles \(\beta\) to degree \(d\) given the ordering in context \(C\).

(7)  
\[
[dumb]^{0,8,C} = \{f_{(e, st)} : f \approx_{0,8,C} \lambda x \lambda w[x \text{ is dumb in } w]\} = \begin{cases}
\lambda x \lambda w[x \text{ is dumb in } w], \\
\lambda x \lambda w[x \text{ is ignorant in } w], \\
\lambda x \lambda w[x \text{ is dopey in } w], \\
\lambda x \lambda w[x \text{ is foolhardy in } w], \\
\lambda x \lambda w[x \text{ is foolish in } w], \\
\ldots
\end{cases}
\]

(8)  
\[
[more_m \alpha \text{ than } \beta]^{d,C} = \left\{ \lambda x \lambda w \left[ \max(d' : \exists f [f \in \{ \alpha \}]^{d',C} \land f(x)(w) = 1) > \right] \right\}
\]

(9)  
\[
[more_m \text{ dumb than crazy}]^{d,C} = \left\{ \lambda x \lambda w \left[ \max(d' : \exists f [f \in \{ dumb \}]^{d',C} \land f(x)(w) = 1) > \right] \right\}
\]

\[
= \left\{ \lambda x \lambda w \left[ \max(d' : \exists f \approx_{d,C} \lambda x \lambda w[x \text{ is dumb in } w] \land f(x)(w) = 1) > \right] \right\}
\]

\[
\max(d'' : \exists g \approx_{d,C} \lambda x \lambda w[x \text{ is crazy in } w] \land g(x)(w) = 1) \}
\]

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Clausal Complementation and the DOC Paradigm: A Selection-based Approach
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This talk offers a new solution to Postal’s (1974) Derived Object Constraint (DOC) paradigm. It does so by making the following two proposals. First, based on evidence from selection, I propose that the embedded clause in DOC constructions is not an argument of the predicate itself but of a higher head. Second, an interface view of binding indices, following Kratzer (2004), is extended, preventing arguments from composing in the subject position of (propositional) infinitives, thereby forcing them to raise. The height of the infinitive in the DOC construction, however, prevents certain movements, and together these two proposals derive the curious set of facts about the DOC paradigm.

Postal’s DOC: The predicates in (1), the believe-class, license ECM/subject-to-object raising (S-to-O), as well as other operations that take such a representation as their input, like passive raising (1)b. Postal (1974) observed that some verbs – the DOC class including think, allege, say – do not allow ECM (2a), but allow traces of movement from the embedded subject position: passive raising (2b), wi-movement (2c), topicalization (2d), and complex NP shift (2e). Expletives are licensed as infinitival subjects (2f). In general objects are licensed with DOC verbs (cf. John said/thought/alleged incriminating things). Since expletive subjects are permitted, we suggest that the DOC generalization can be formulated as in (3) (cf. Pesetsky (1992), Bošković (1997)).

I. Selectional Difference: An unnoticed difference between the believe-class and the DOC class concerns the ability to select for propositional content. Believe-class predicates select for nominals with propositional content, such as idea, crap, nonsense, proposition (4). DOC verbs, on the other hand, do not select for such objects (5)a,b. It will be argued that DOC predicates are simply extensional predicates, descriptions of activities of thinking and claiming, for instance. They do not function as propositional operators by themselves, unlike believe-class verbs which describe states of attitude holders (Pesetsky 1992), and as such do not select for propositions. The modality involved in attitude ascriptions with DOC predicates is provided by a separate functional head. As (6) shows, the matrix vP serves as a restrictor of this (universal) modal, and the infinitive is in the nuclear scope. Below (6) is an informal translation for the meaning of a DOC construction, where the content of the matrix clause serves as the modal base for the attitude ascription. Crucially, for the purposes at hand, the infinitive is not a complement of the predicate, but of a head which is higher than matrix vP. In contrast, believe-class predicates in (1) and (4) do select for propositional complements directly, and as a consequence, clausal complements are merged lower, as sister to V.

II. Raising Infinitives: The second component of the proposal involves the internal structure of the infinitive. We will capture the generalization of (3) in a framework in which binder indices, following Kratzer (2004), regulate what positions arguments move to. Under this approach, heads that carry binder indices (interpreted as lambdas) allow moved arguments to compose in their specifiers, as shown in (7)a. We suggest that (raising) infinitives lack such an index, and DPs cannot compose in these subject positions (as it would lead to the type clash (7)b)).

Putting the pieces together: Because DPs subjects cannot compose in the infinitives, both believe-class and DOC class constructions require their embedded subjects to raise. In the believe-class, the subject undergoes raising – which we take to be to a position between v and V. (Contra Lasnik 1999, object raising will be obligatory.) In DOC predicates, however, the height of the infinitive prevents movement into the matrix vP (as that would constitute improper sideways movement, see (6)), and hence (2) is ill-formed. However, the movement operations in (2)b-e are available, since they are movements to higher positions. The account also correctly predicts that expletives, being semantically empty (therefore not needing to compose), can remain in the infinitive without causing a type clash. Finally, I will compare this solution to case-based approaches (Kayne 1984, Bošković 1997).
Clausal Complementation and the DOC Paradigm: A Selection-based Approach

(1) **ECM infinitives**
   a. Melvin believed/considered/held/understood Bill to be a liar.
   b. Bill was believed/considered/held/understood to be a liar.

(2) **DOC-class infinitives**
   a. *He alleged Melvin to be a pimp.  [Postal 1974(40): 304]
   b. Melvin was alleged to be a pimp.  [Postal 1974(39b): 304]
   c. Who did they allege to be a pimp?  [Postal 1974(42b): 304]
   d. Melvin, he alleged to be a pimp.  [Postal 1974(42a): 304]
   e. They alleged to be pimps—all of the Parisians the CIA had hired.  [Postal 1974(42d): 305]
   f. He alleged there to be gambling going on in the back room.  [Postal 1974(41): 304]

(3) **DOC Generalization:** DPs cannot be interpreted in the specifier of infinitival T; they must move to a higher position or not be interpreted at all (i.e. expletives)

(4) Melvin believes/understands/considered the proposition/notion/idea/nonsense/theorem (that Iran is supplying weapons to insurgents).

(5) a. *Melvin wagered/claimed/thought the proposition/notion/idea/nonsense/theorem (that Iran is supplying weapons to insurgents).
   b. *Melvin thought/claimed what John said.  (cf. Melvin believed what John said)

(6) Structure for DOC sentences: Infinitive is argument of Modal head

```
    ModP
     /\          
  ModP' Infinitive : q
    /\          
  Modal vP : p  Melvin to be a pimp
     /\          
  John thought
```

\[ [[\text{Modal}]] = \lambda p. \lambda q. \lambda w. \forall w' \text{ compatible with the content of } p \text{ in } w, q(w') = 1 \]

"According to the content of the event of John thinking, Melvin to be a pimp."

(7) **a. Binder Index on \( T_{\text{fin}} \)**

```
    TP: t
     /\          
  DP1: e  TP: \lambda 1. P([1]): (e,t)
     /\          
  T_{\text{fin}}  VP: t
     /\          
  ![1]  ...P([1])...
```

**b. No binder index on \( T_{\text{inf}} \): type clash if DP doesn’t raise.**

```
    TP: t
     /\          
  DP1: e  TP: \lambda 1. P([1]): t
     /\          
  T_{\text{inf}}  VP: t
     /\          
  ![1]  ...P([1])...
```

References


**SCOPE OF EVEN: A CROSS-LINGUISTIC PERSPECTIVE**  
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*Even* triggers the scalar presupposition (ScalarP) in (1) (Karttunen and Peters 1979 (K&P)). In (2a), the ScalarP of *even* is that ‘that Leo read SS’ is less likely than the alternatives ‘that Leo read’ *x*. *Even* in the negative sentence (2b) carries the opposite presupposition; it is more likely for Leo to read SS than other books. K&P claim that *even* in (2b) takes scope over negation, as in (4a), and it triggers the ScalarP that ‘that Leo didn’t read SS’ is less likely, or equivalently, ‘that Leo read SS’ is more likely. In contrast, Rooth (1985) argues that *even* is lexically ambiguous between the regular *even* with (1) (less-likely) and the NPI *even* with (3) (more-likely). *Even* in (2b) is the NPI *even* with the LF in (4b), which evokes the ScalarP that ‘that Leo read that book’ is more likely. This paper presents cross-linguistic novel data to support K&P’s scope theory (or more weakly, to show that there is no need to posit the NPI *even*).

**Argument for Scope Theory** The Japanese particle -*mo* ‘also’ can be interpreted as ‘even’ when it attaches to a focused element. -*Mo* in (5) corresponds to *even* in (2): Leo’s reading of SS is less likely in (5a), while it is more likely in (5b). Besides proper nouns, -*mo* can attach to quantity expressions, as in (6), where -*mo* associates with the numeral 5. The positive sentence (6a) presupposes that the quantity is unexpectedly large; the speaker expected the number of books that Leo read to be smaller than 5. This naturally follows from the ScalarP of -*mo* in (1): ‘that Leo read 5 books’ is less likely than ‘that Leo read n books’ (n≠5), which holds when n<5 (e.g., ‘that Leo read 5 books’ entails ‘that Leo read 4 books’, etc.). Thus, for this ScalarP to be sensible, 5 must be larger than the alternative numerals, which accounts for why 5 is taken to be large. In contrast, ambiguity arises with the negative sentence (6b): the quantity may be taken to be unexpectedly small or large (Numata 1992, among others), depending on the truth condition of the sentence. (7) shows that (6b) without -*mo* is ambiguous between two readings, ¬»5 and 5»=. The small reading in (6b) obtains when ¬5, and both the scope and the lexical theory of *even* can account for it. Under the scope theory, -*mo* takes scope over negation, as in (8a), and yields the ScalarP that λx.¬∃[|x|=5∧book(x)∧read(l,x,w)] is less likely, or equivalently, λw.∃[|x|=5∧book(x)∧read(l,x,w)] is more likely than the alternatives. This holds when n>5, which makes 5 small (i.e., the speaker expected that the number of books that Leo read is more than 5). Under the lexical theory, -*mo* is under negation at the LF, as in (9a), and triggers the ScalarP that ‘that Leo read 5 books’ is more likely than ‘that Leo read n books’, which holds when n>5, hence 5 is small. The two theories diverge as to the large reading, which obtains when 5»=. 5 associates with -*mo*, thus it must be in the scope of -*mo*. Moreover, 5 must be above negation to achieve 5»=. Then, the LF should be ¬*mo*5»=. This LF is incompatible with the lexical theory, because the NPI *even* must be in the scope of negation. In contrast, this LF is compatible with the scope theory (in (8b)): the ScalarP of -*mo* says that λx.∃[|x|=5∧book(x)∧read(l,x,w)] is less likely, which holds when n<5, thus 5 is large (i.e., the speaker expected that the number of books that Leo didn’t read is less than 5).

**Argument for Lexical Theory** Contrary to Japanese, the German examples corresponding to (6b) may support the lexical theory. German has two lexical items for *even*: (in 10), SS may be a less likely (with *sogar*) or a more likely (with *auch nur*) book for Leo to read. This makes sense under the lexical theory: *sogar* and *auch nur* (or *einmal* in negative contexts) are the regular and the NPI *even*, respectively (Rooth 1985). This view naturally accounts for (11). (11a) with the NPI *even* (i.e., *einmal*) only allows 5»5, and presupposes that 5 is small. As shown above, the lexical theory is capable of accounting for this (as in (9a)). (11b) with the regular *even* (i.e., *sogar*) only permits 5»5, and it presupposes that 5 is large. The surface order here is *sogar*5»5, thus *sogar* combines with λw.∃[|x|=5∧book(x)∧read(l,x,w)], which yields the large reading (as in (8b)). Unlike the Japanese *mo* in (6b), the wide scope of *sogar* is expressed on the surface, and thus no covert LF movement of *sogar* is required, which makes the scope theory superfluous.

**Scope Theory Strikes Back** However, there are cases where a covert movement of *sogar* is required. (12) shows that a numeral may take scope above or below *refuse*. In (13) with *sogar*, the reading 5*refuse* is available, with the presupposition that 5 is large (i.e., the speaker expected that the number of books that Leo refused to read is less than 5). Since 5 must be in the scope of *sogar*, the only possible LF is sog(ar)5»5*refuse*. Unlike in (11b), *sogar* in (13) is below *refuse* on the surface, and thus we need to assume that *sogar* moves above *refuse* at the LF, which supports the scope theory.

**Challenge for Scope Theory** A challenge for the scope theory is to account for why *even* items such as *auch nur* (or *einmal*) in (10) and (11a) are limited to NPI-licensing contexts, and for why they trigger the more-likely presupposition. *Auch nur* in (14) behaves on a par with *einmal* in (11a): it only has the narrow scope reading of the numeral (i.e., *refuse*5), and 5 is taken to be small. To account for this, I adopt Guerzoni’s (2003) analysis that *auch nur* is decomposed to *auch* ‘also’ and *nur* ‘only’. She argues that additivity of *auch* in (15) contradicts with exclusivity of *nur* in (16), and that this contradiction is resolved if there is an intervening downward-entailing (DE) operator (e.g., negation, *refuse*), yielding the LF: euch>DEnur. It naturally follows that *auch nur* needs to occur in DE contexts. Turning now to (14), *auch* and *nur* associate with the same focus (i.e., *[five]*), thus 5 must be in the scope of the two particles. Then the only possible LF is auch>refuse>nur[5]*f*. This accounts for why 5*refuse* is unavailable. Guerzoni claims that the ScalarP of *auch nur* comes from the ScalarP of *nur* ‘only’ in (17). In (14), *nur* combines with ‘that Leo read 5 books’, thus the ScalarP is that this proposition is more likely, which holds when n>5, i.e., 5 is small. In this way, Guerzoni’s analysis lets us do without positing the NPI *even*. Together with the argument from the Japanese *even*, I conclude that the scope theory fares better.
(1) “even_C ϕ” presupposes that \([ϕ]_{C}\) is less likely than any other element of C
(defintion taken from Schwarz 2005)

(2) a. Leo even read [Syntactic Structures]_f. ([ ]_f: the element with focus that associates with even)
b. Leo didn’t even read [Syntactic Structures]_f.

(3) “even^*_C ϕ” presupposes that \([ϕ]_{C}\) is more likely than any other element of C (from Schwarz 2005)

(4) a. LF under the scope theory: [even C [ not [ Leo read [Syntactic Structures]_f ]] ]
b. LF under the lexical theory: [ not [ even^*_C [ Leo read [Syntactic Structures]_f ] ] ]

(5) a. Leo-wa [Syntactic Structures]-mo yon-da.
   Leo-TOP [ SS]-MO read-PAST ‘Leo even read SS.’ = (2a)
b. Leo-wa [Syntactic Structures]-mo yom-anakat-ta.
   Leo-TOP [ SS]-MO read-NEG-PAST ‘Leo didn’t even read SS.’ = (2b)

(6) a. Leo-wa hon-o [5-satu]-mo yon-da.
   Leo-TOP book-ACC [5-CLASSIFIER]-MO read-PAST ‘Leo even read five books.’
b. Leo-wa hon-o [5-satu]-mo yom-anakat-ta.
   Leo-TOP book-ACC [5-CL]-MO read-NEG-PAST ‘Leo even didn’t read five books.’

(7) Leo-wa hon-o 5-satu yom-anakat-ta.
   Leo-TOP book-ACC 5-CL-MO read-NEG-PAST ‘Leo didn’t read five books.’
   \( \text{OK} \rightarrow \rightarrow 5: 5 \text{ is small, } \text{OK}5\rightarrow : 5 \text{ is large} \)

(8) LF under the scope theory:
   a. even \( \rightarrow \rightarrow \) [five]_f \( \rightarrow 5 \) is small (same as (4a))
   b. even [five]_f \( \rightarrow \rightarrow \) \( \rightarrow 5 \) is large

(9) LF under the lexical theory:
   a. \( \rightarrow \rightarrow \) even [five]_f \( \rightarrow 5 \) is small (same as (4b))
   b. NA \( \rightarrow 5 \) is large

(10) Leo hat abgelehnt, {sogar / auch nur} [SS]_f zu lesen.
    Leo has refused [even / even] [SS] to read ‘Leo refused to read even SS.’

(11) a. Leo hat nicht einmal [fünf]_f Bücher gelesen.
    Leo has not even [five] books read ‘Leo didn’t even read five books.’
    \( \text{OK} \rightarrow \rightarrow 5: 5 \text{ is small, } \text{OK}5\rightarrow : 5 \text{ is large} \)
b. Leo hat sogar [fünf]_f Bücher nicht gelesen.
    Leo has even [five] books not read
    \( \rightarrow \rightarrow \rightarrow 5: 5 \text{ is small, } \text{OK}5\rightarrow : 5 \text{ is large} \)

(12) Leo hat abgelehnt, fünf Bücher zu lesen.
    Leo has refused five books to read ‘Leo refused to read five books.’
    \( \text{OK refuse}5, \text{OK}5\rightarrow \text{refuse} \)

(13) Leo hat abgelehnt, sogar [fünf]_f Bücher zu lesen.
    Leo has refused even [five] books to read ‘Leo refused to read even five books.’
    \( \text{OK}5\rightarrow \text{refuse: 5 is large} \)

(14) Leo hat abgelehnt, auch nur [fünf]_f Bücher zu lesen.
    Leo has refused even [five] books to read ‘Leo refused to read even five books.’
    \( \text{OK refuse}5: 5 \text{ is small, } \text{OK}5\rightarrow \text{refuse} \)

(15) “auch_C p” presupposes that there is some proposition q in C such that q\(p\) and q is true

(16) “nur_C p” presupposes that there is no proposition q in C such that q\(p\) and q is true
   (for Guerzoni (2003), this is a presupposition, not a truth condition)

(17) “nur_C p” presupposes that p is more likely than any other element of C

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Purpose: The primary goal of this paper is to explain a puzzle regarding the so-called Proper Binding Condition (PBC) effects (in Fiengo’s (1977) sense) in between Raising-to-Object (RTO) and Obligatory Object Control (OC) constructions in Korean. In particular, this paper aims to explain why scrambling is not applicable to the remnant clause regardless of the case form of the embedded subject in RTO, while the same operation can front the remnant clause stranding the accusative case-marked subject but not the nominative case-marked one in OC.

Word Order Asymmetry: Case alternations in Raising and Control Constructions in Korean, as in (1a) and (1b) respectively, have attracted linguists’ attention due to the fact that the same alternations are not common in Indo-European languages. To begin with, it has been claimed that the case alternation of the embedded subject in (1a) faithfully reflects its different structural position (cf. J. Yoon (2006), J-S Lee (1992) and S. Hong (2005) for Korean; Kuno (1976), Saito (1985) and Tanaka (2002) for Japanese). That is, Yenghi marked with nominative case stays downstairs, as in (2a), whereas the same argument has moved to a position to which accusative case is assigned, as in (2b) (but the landing site for the raised object varies depending on the analysis). Furthermore, it has recently been shown that the Kuno-style movement analysis of case alternations in RTO can be extended to that of case alternations in OC. In particular, Monahan (2003) adopts a ‘Control-as-Move’ analysis (cf. Hornstein (2001), among others), arguing that the persuadee DP with accusative case has raised out of the complement clause and functions as a controller, as in (3b), while the persuadee DP with nominative case remains in the complement clause, as in (3a). His analysis amounts to saying that Korean has two types of OCs: that is, forward OC (FOC) in (3b) and inverse OC (IOC) in (3a). However, although the embedded subject in RTO and the controller in OC exhibit a similar property in that the accusative case-marked argument occupies a position in the matrix clause, an asymmetry arises if we apply local scrambling to the complement clause. In the case of RTO, on the one hand, the application of scrambling to the complement clause in (2a) and (2b) invariably results in an ungrammatical sentence, as in (4a) and (4b). In the case of OC, on the other, the same operation applied to the complement clause in (3a) and (3b) gives us bifurcating results: the fronted complement clause in IOC turns out to be ungrammatical, as in (5a), while the grammaticality is still maintained in FOC even when the complement clause is displaced, as in (5b).

Proposed Analysis: To explain the observed asymmetry in relative ordering between a clausal complement and a case-alternating DP in Korean RTO and OC, this paper first assumes that case alternation in RTO is a result of A-movement out of a finite clause, allowing us to maintain a rigid correlation between finiteness of T\(^0\) and the availability of nominative case. Second, I also assume with Monahan (2003) that OC can be reduced to A-movement, and that Korean exhibits inverse control. Given the movement analysis of RTO and the Control-as-Move approach, this paper suggests that the ungrammaticality of (4a) and (5a) is attributed to a general constraint that movement should target a constituent. Since the nominative case-marked argument Yenghi-ka remains in the embedded clause in both (4a) and (5a), displacing only part of the complement clause would violate the general constraint on movement. Notice, however, that if we maintain the movement analysis of case alternations in both RTO and OC, it appears to be puzzling why fronting of the complement is disallowed in (4b) but not in (5b). That is, given the current analysis where the accusative Case-marked argument Yenghi-lul ends up being in the matrix clause, it is incorrectly predicted that fronting of the remnant clause in both the RTO and the FOC would violate the Proper Binding Condition in (6) because a trace/copy of the raised object or the persuadee DP cannot be bound by its respective antecedent. To account for this asymmetry, I adopt Hiraiwa’s (2003: (16)) notion of Cyclic Spell-Out in (7), a stricter version of Chomsky’s (2001) Phase Impenetrability Condition, which claims that if movement extends the edge of the phase, then the domain should be spelled-out or transferred and becomes inaccessible to any further syntactic operation; otherwise, the domain still remains accessible. Given this Cyclic Spell-Out model, the contrast between (4b) and (5b) immediately follows. On the one hand, A-movement of Yenghi-lul in (4b) targets the outer Spec-vP position, extending the edge of the phase, as in (8a). Since the edge-extending operation (EEO)
causes the domain to be spelled-out, the remnant complement clause is no longer accessible to the further operation (i.e., scrambling), which accounts for the ungrammaticality of (4b). On the other hand, the persuadee DP in (5b) has moved to the Spec of the matrix VP to get a thematic role, as in (8b), which fails to extend the edge of the phase. Consequently, the domain remains accessible since it has not been spelled-out, which explains why the remnant CP can be scrambled in (5b).

**Conclusion:** The current analysis has demonstrated the following: (i) Korean allows a DP to move out of a (finite) complement clause to get accusative case in both the RTO and the OC construction, and (ii) why scrambling of the remnant clause out of which the accusative case-marked DP has moved is allowed in OC but not in RTO can be answered under a strict derivational model of grammar that does not rely on the representational notion of PBC, in coupled with the assumption that the landing sites of the case-alternating DPs are different in the two constructions.

**Data:**

   C.-Nom Y.-Nom/.Acc be.pretty-Past-Dec-Comp think-Past-Dec
   ‘Cheli thought that Yenghi was pretty’
   b. Cheli-ka Yenghi-ka/lul ttena-tolok seltukhay-ss-ta. (OC)
   C.-Nom Y.-Nom/Acc leave-Comp think-Past-Dec
   ‘Cheli persuaded Yenghi to leave’

   C.-Nom Y.-Nom/Acc be.pretty-Past-Dec-Comp think-Past-Dec
   C.-Nom Y.-Nom leave-Comp think-Past-Dec

(3) a. Cheli-ka t[CP Yenghi-ka] ttena-tolok seltukhay-ss-ta. (IOC)
   C.-Nom Y.-Nom leave-Comp persuade-Past-Dec
   b. Cheli-ka Yenghi-lul i [CP ttena-tolok] seltukhay-ss-ta. (FOC)
   C.-Nom Y.-Acc leave-Comp persuade-Past-Dec

   C.-Nom Y.-Nom/Acc be.pretty-Past-Dec-Comp think-Past-Dec
   C.-Nom Y.-Nom leave-Comp persuade-Past-Dec

   C.-Nom Y.-Nom leave-Comp persuade-Past-Dec
   C.-Nom Y.-Acc leave-Comp persuade-Past-Dec

(6) Traces must be bound.

(7) Transfer/Spell-Out applies to a phase PH as soon as its edge is extended.

(8) a. \[ vP \beta [vP [v’ \text{ [CP(= EEO)]}]]] \]
   RTO (= EEO)
   b. \[ vP \beta [vP [v’ \text{ [CP(= EEO)]}]]] \]
   OC (≠ EEO)

Pragmatic Blocking in Gitksan Modals

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The prevailing semantic analysis of modality claims that modals introduce quantification over possible worlds: for example, English *must* is a universal quantifier over worlds, while *might* is an existential quantifier. Modals also involve implicit conversational backgrounds, which vary depending on context (Kratzer 1991). While modals in English lexically encode quantificational force, and leave the conversational background to be filled in by context, many languages have a somewhat reversed arrangement: conversational backgrounds are lexically encoded, while the effects of quantificational force may either not be present, or are determined by other factors such as the context. This latter arrangement usually characterizes an evidential system (Palmer 2006), and recent analyses of these systems have claimed that evidentials are in fact a sub-type of epistemic modals (Izvorsky 1997; Matthewson, Rullmann & Davis 2005, 2006). In the Tsimshianic language Gitksan, epistemic modals do not in general encode quantificational force. Rather, they encode restrictions on the conversational background as a lexical property, which also may include the type of evidence a speaker has for making a modal claim. However, these 'non-quantificational' modals in Gitksan interact in order to derive the effects of quantificational force. It is proposed that this is achieved by importing the formal notion of blocking (Wunderlich 1996; Déchaine & Wiltschko 2002), where one evidential blocks a less-specialized evidential. Additionally, it is claimed that this blocking is pragmatic: specifically, it is the utterance context and a speaker's perception of evidence which determine the 'strong' and 'weak' readings that would correspond with universal and existential quantification, respectively.

In Gitksan, there are two morphemes which express epistemic modality: the evidential *n'akw* in (1)a., and the dubitative *=ima* in (1)b. Although *n'akw* and *=ima* appear to be similar, there are two semantic features that distinguish them. The first can be observed in the translations below involving modal force: *=ima* can express either epistemic possibility or necessity, while *n'akw* can only express what is usually translated by speakers as necessity. The second difference involves the notion of evidence: *=ima* is compatible with the availability of direct or indirect evidence, or it can assert a simple speculative judgment with little or no evidence. The distribution of *n'akw* is more restricted: its interpretation requires that the speaker have some type of direct evidence for the assertion. However, *n'akw* and *=ima* also diverge in a different way: *n'akw* has a unique speech act function, similar to that of a mirative, and many speakers translate it as a *must*-type rhetorical statement or question. In (2)a., the speaker is expressing her frustration that the star batter on her favourite baseball team is close to striking out and losing the game. She is not trying to assert that the batter is actually blind, but rather she is submitting a subjective judgment based on what she perceives as evidence: the fact that he keeps missing the ball. However, the possibility of actual blindness is expressed in (2)b., for example, in a situation where a speaker encounters a person on the street walking with a white cane.

This paper claims that these distinctions between *=ima* and *n'akw* are a result of the different levels they operate on: *=ima* is part of the proposition a speaker asserts, while *n'akw* operates above the proposition and changes the assertion type of an utterance. Following similar work in MRD (2005, 2006), the denotation of *=ima* is that of an epistemic modal with default existential quantification. Because *n'akw* is an illocutionary operator, it does not involve quantification; rather, there is a felicity condition which requires direct evidence contexts for its use. It is this direct evidence condition that gives *n'akw* its *must*-like interpretation in 1(a), and its *must*-like mirative interpretation in 2(a). In contrast, *=ima* is less specialized and hence, 'weaker': as a semantic operator, it simply introduces quantification over a set of possible worlds – there are no felicity conditions associated with it, nor is there any presupposition of evidence attached to it. The specialization *n'akw* has for direct evidence and the interpretations is triggers is what pragmatically blocks *=ima* from having a strong reading in the same utterance context.
In addition to exploring the expression of modality on the semantics-pragmatics interface, this paper contributes to both the empirical and formal study of modals and evidentials cross-linguistically, specifically addressing the issues languages such as Gitksan bring to bear on the standard treatment of modals which lexically encode quantification, and the interpretations of must and might.

(1)  a.  \(n'akw=hl\)  mukw=hl  maay'
     MOD/EVID=DET ripe=DET  berries
     “The berries must be ripe.”

     b.  mukw=ima=hl  maay'
         ripe=DUB=DET  berries
         “The berries might/must be ripe.”

(2)  a.  \(n'akw=hl\)  sins-t
     MOD=DET  blind-3
     “He must be blind!” or “Is he blind or something?”

     b.  sins=ima  n'it
         blind=DUB  3
         “He might/must be blind.”


Maliseet VP-ellipsis and the Syntax of Polysynthesis

Passamaquoddy-Maliseet is a polysynthetic language, with complex verbal morphology, widespread use of null anaphora, and free word order (1). Classic analyses of this type of language include Hale (1983), which assigns them a ‘flat’ structure, and Jelinek (1984) and Baker (1996), who claim that the apparent arguments in these languages are adjoined to higher clausal positions, with the argument positions filled by agreement morphology (or by null nominals). I join Bruening (2001) in arguing against these positions for this language; argument structure in Maliseet is straightforwardly configurational, and in fact it appears that the movements responsible for the freedom of word order in (1) are postsyntactic.

VP-ellipsis...
I analyze (2a) as object pro-drop, and (2b) as VP-ellipsis. (2b) differs from (2a) in that the verb stem *apqote*- ‘open’ is missing; the verbs have all the same morphology otherwise, including suffixes that mark the verb as transitive and as having a singular inanimate object. We will see that dropping the verb, as in (2b), entails that other VP-internal material must also be absent, including the direct object and certain adverbs.

...elides adverbs and direct objects, as well as the verb.
While (2a-b) are roughly synonymous, they diverge in meaning once we add an adverb like *menakaciw* ‘quietly’, yielding (3). The examples in (3) differ just as their English translations do; just if the verb stem is missing, as in (3b), then the sentence is interpreted as also having an elided adverb. The data are the same in (4); as we expect, VP-ellipsis is unaffected by syntactic islands. A similar argument follows from the interpretation of the indefinite direct object in (5); object pro-drop forces identity of reference, while VP-ellipsis allows the direct objects not to corefer. In other words, ellipsis deletes not just the verb, but a constituent containing the verb as well as certain adverbs and direct objects.

Object agreement is still present...
The verbs in these VP-ellipsis examples bear suffixes indicating that they are transitive and have inanimate objects. This constrains how they may be used; (6) shows that if the model verb is intransitive, or has an object of the Animate grammatical gender, then these suffixes on the elided verb are inappropriate. If the elided object is plural, the verb will bear the appropriate agreement morphology (7).

but the verb and the object are obligatorily absent.
Not only can VP-ellipsis elide the direct object, but in fact object ellipsis is inescapable; the verbs under consideration cannot have objects in the relevant meaning (8). Similarly, VP-ellipsis must elide the verb; examples like (3a) and (5a), in which the verb is not elided, cannot have the VP-ellipsis meaning. Maliseet thus crucially differs from languages like Irish (McCloskey 1991, Goldberg 2005), which have been claimed to allow the verb to escape VP-ellipsis (9).

Conclusion
VP-ellipsis in Maliseet targets a constituent that includes the verb, the direct object, and certain adverbs. All of these elements are obligatorily absent if ellipsis takes place. This is surprising on the Jelinek/Baker approach, since the agreement which is supposed to license the putatively adjoined direct object is in fact present in the VP-ellipsis examples, yet the direct object is obligatorily absent. I conclude that Maliseet has a straightforwardly configurational VP, with the direct object in the ordinary argument position. In fact, given that VP-ellipsis is bled neither by verb movement nor by the movements that give rise to the freedom of word order in (1), it appears that these movements are postsyntactic; this would explain why these elements cannot evacuate the VP in the syntax before ellipsis applies (cf. Adger 2007).
   1- brother 1-PERF-give-DIR-N-InanP all canoe-InanP
   ‘I gave my brother all the canoes’

   b. Nkisimilanol nsiwehs psite oqitonul.

   c. Psite oqitonul nsiwehs nkisimilanol.

2. N-iukuwoss ‘t-apaqote-htu-n khakon,
   1- mother 3-open -TI -N door
   ‘My mother opened the door...’
   a. ... kenuk nil nt-aluw- apqote-htu-n
      but I 1- unable-open -TI -N
      ‘...but I couldn’t open it’
   b. ... kenuk nil nt-aluw-ehtu-n
      but I 1-unable-TI-N
      ‘...but I couldn’t (open the door).’

3. N-iukuwoss menakaciw ‘t-apaqote-htu-n khakon,
   1- mother quietly 3-open -TI -N door
   ‘My mother opened the door quietly...’
   a. ... kenuk nil nt-aluw- apqote-htu-n
      but I 1- unable-open -TI -N
      ‘...but I couldn’t open it’
   b. ... kenuk nil nt-aluw-ehtu-n
      but I 1-unable-TI-N
      ‘...but I couldn’t (open the door quietly).’

4. Tokec kis- apaqote-htu-wan khakon menakaciw, mate-hc n-tuhkim -a -w wasis,
   if PERF-open-TI -1Conj door quietly not-FUT 1-awaken-DIR-NEG child
   kenuk nt-aluw-ehtu-n
   but 1-unable-TI-N
   ‘If I can open the door quietly, I won’t wake up the baby, but I can’t (open the door quietly)’

5. N-siwehs ‘- kisi- sunh-om-on ponapsq;
   1 brother 3-PERF-paint-TI-N rock
   ‘My brother painted a rock...’
   a. ... nil-ote -na n-kisi- sunh-om-on
      I FOC also 1-PERF-paint-TI-N
      ‘...and I painted it too’
   b. ... nil-ote -na n-kis- -ehtu-n
      I FOC also 1-PERF-TI-N
      ‘...and I did (paint a rock) too’

   [we painted the same rock]

   1 brother PERF go.uphill 3-PERF-paint-DIR-OBV doll -OBV
   ‘My brother went up the hill/painted a doll...’
   kenuk nil nt-aluw-ehtu-n
   but I 1 unable TI N
   ‘but I couldn’t.’

   [we painted different rocks]

7. N-iukuwoss ‘t-apaqote-htu-n -ol khakon -ol, kenuk nil nt-aluw-ehtu-n -ol
   1 mother 3 open TI N InanPL door InanPL but I 1 unable TI N InanPL
   ‘My mother opened the doors, but I couldn’t (open the doors)’

8. * ‘-kisi- kpo-htu-n khakon, kenu ‘t-aluw-ehtu-n possiyantesk
   3-PERF-close-TI -N door but 3-unable-TI-N window
   ‘She closed the door, but she couldn’t close the window’

   said I that would.buy-1Sg it and bought
   ‘I said that I would buy it, and bought it’
Groups in the semantics of reciprocal verbs
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A recurring question in studies of reciprocalization (the process that creates reciprocal verbs) concerns the difference between verbal reciprocals and their well-studied pronominal counterparts (Faller, to appear, Siloni 2001, to appear). In this paper I offer a novel answer to this question. I propose that reciprocal verbs involve collective predication that is absent from other expressions of reciprocity. In particular, I explore Artstein’s (1997) hypothesis that the domain of events is similar to the domain of individuals in containing elements which are groups. I propose that reciprocal verbs are predicates of group events and derive their essential properties from this assumption. Reciprocalization under this view reduces to event conjunction, an operation that is independently motivated for predicate conjunction in the syntax (Artstein 1997).

Data. I use the term reciprocal verbs to refer to intransitive verbs with so-called reflexive morphology as in (1a) and (2a), verbs that express reciprocity without the aid of a reciprocal pronoun. Typically, reciprocal verbs are morphologically and semantically related to a non-reciprocal transitive predicate (1b), (2b).

Proposal. A reciprocal verb is derived by applying an operation of collective event conjunction to its transitive counterpart (the external argument is severed, and ↑ is Landman’s 2000 group formation operation): 

\[ \lambda P \lambda Q. \lambda e (\exists e_1, e_2 \in E [e = ↑ (e_1 \sqcup e_2) \land P(e_1) \land Q(e_2)]) \]

This operation is coupled with reduction of the transitive’s internal thematic role (as proposed for reflexivization by many, also by Siloni 2001 for reciprocalization). An example is given in (3).

Collective event conjunction was proposed by Artstein (1997) to account for collective predicate conjunction in sentences like (4). If this operation could also apply in the lexicon, reciprocal verbs are exactly the output one would expect: predicates of pair events that group together events of the same kind \( P = Q \). Importantly, reciprocalization shares with predicate conjunction the following core properties: (i) the requirement that the participants of the conjoined events be the same, and (ii) cohesiveness of the collective event. A reciprocal kissing event, for example, involves the same two people kissing each other at the same time, at the same location, and with the same intent.

The thematic role of a reciprocal group event will be defined as the group including the individuals that fulfill that role in the non-reciprocal events: \( \text{Agent}(↑ (e_1 \sqcup e_2)) = ↑ (\text{Agent}(e_1) \sqcup \text{Agent}(e_2)) \). If John and Mary kissed, they were the group agent of a singular reciprocal kissing event. In addition, each one was an agent of a related non-reciprocal kissing event of the other. This definition guarantees that the agent of a reciprocal will include at most two individuals. To ensure that pairs are created, reciprocal verbs should in addition be classified in the lexicon as collective predicates (they distribute down to groups).

Results. The proposal opens the way to solving several puzzles in the semantics of reciprocal verbs. First, it explains why reciprocal relations are irreflexive (the distinctness condition). Second, it derives the property of symmetry that has been argued to distinguish verbal reciprocals from reciprocals formed in the syntax (Dimitriadis 2003, Siloni 2002, 2007). Symmetry follows naturally from event conjunction and need not be introduced as a primitive notion. Third, the idea that reciprocal events exist in addition to the non-reciprocal events on which they are based is key to understanding the entailment from a reciprocal to its transitive, and crucially the lack of an entailment in the other direction (5). Finally, the proposal makes interesting predictions regarding the set of transitive verbs that may have reciprocal counterparts. Inputs to collective event conjunction must be 2-place agentive verbs whose internal argument can also naturally be interpreted as an agent (*RCP.eat, for example, would be out because people are not usually objects of ‘eat’). In addition, there should be a natural way to interpret mutual actions of the kind denoted by the input verb as one cohesive event (6).

Conclusion. I argue that collectivity — analyzed as predication to group events and individuals — plays a crucial role in the semantics of reciprocal verbs in languages like Hebrew and English. Groups provide the glue that makes reciprocal events what they are: events that equal more than the sum of their parts.
Examples

(1) a. yosi ve-חגטר hitxabku
   Yossi and Jagger RCP.embrace.PAST.PL
   ‘Yossi and Jagger embraced’

   b. yosi xibek et חגטר
   Yossi embrace.PAST.SG ACC Jagger
   ‘Yossi embraced Jagger’

(2) a. The drunk and the homeless person embraced. (English)
   b. The drunk embraced the homeless person/the lamppost.

(3) \[\text{kiss} = \lambda x.\lambda e.\text{kiss}(e) \land \text{Theme}(e, x)\]
\[\text{RCP.kiss} = \lambda e (\exists e_1, e_2 \in E[e = \uparrow(e_1 \sqcup e_2) \land \text{kiss}(e_1) \land \text{kiss}(e_2)])\]

(4) John picked up the phone and dialed Mary’s number.

(5) A and B kissed \(\Rightarrow (\neq)\) A kissed B and B kissed A

(6) Transitive: raʔa ‘see’
    Reciprocal: hitraʔa ‘to meet’, NOT ‘to look at each other’

References


2
Post-focus topics in Italian

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Rizzi (1997) claims that Italian left-peripheral topics (henceforth ‘lp-topics’) may precede as well as follow left-peripheral focus. Under his analysis, a DP like ‘i fiori’ in (1)-(3) is an lp-topic located in the specifier of a topic projection dominating TP in all three sentences, irrespective of its position relative to focus. Rizzi’s analysis contrasts with Samek-Lodovici (2006) where post-focus constituents are discourse-anaphoric phrases right-dislocated in clause-external position (an analysis supported by the negative polarity licensing failures between pre-focus licensors and post-focus negative polarity items; see also Samek-Lodovici 2006, Cardinaletti 2001, 2002, Valduví 1992). Samek-Lodovici’s analysis therefore predicts that ‘i fiori’ and any other similar phrase is an lp-topic à la Rizzi in (1)-(2) but not in (3) where it only constitutes a right-dislocated discourse anaphoric object.

This talk will examine alleged post-focus topics such as ‘i fiori’ in (3) against an array of syntactic properties that can distinguish genuine lp-topics from dislocated DPs. I will show that all tested properties confirm the analysis of these constituents as right-dislocated discourse anaphoric objects rather than lp-topics. Some of these properties are briefly introduced below.

**Clitic-doubling** – Rizzi (1997:292-293) points out that genuine object topics require clitic-doubling in order to associate the base-generated topic with the object of the verb. This correctly predicts the obligatory clitic in (1) and (2) together with the clitic-induced agreement on the past-participle ‘dati’. Rizzi’s analysis, however, also incorrectly predicts a clitic for the post-focus topic in (3), whereas clitic-doubling and the associated past-participle agreement are here obligatorily absent (Benincà & Poletto 2004). This divergence is instead expected under Samek-Lodovici’s analysis where (1) and (2) are analyzed as in Rizzi, whereas ‘i fiori’ in (3) is a right-dislocated DP. This DP cannot be clitic-doubled in sentences like (3) because what is left of the main clause –namely ‘[TP [A MARIA] tRightDislocatedTP]’ (Samek-Lodovici 2006:853, 858)– does not and cannot contain any clitic-hosting head, thus making clitic-doubling impossible.

**Contrastiveness** – Lp-topics are also distinguished from right-dislocated DPs by their potential contrastive interpretation with respect to other lp-topics (Vallduví 1992, Büring 1997, 2005, Benincà & Poletto 2004, Neeleman & Van de Koot, to appear). As expected, this interpretation is present with pre-focus topics –see ‘Luca’ and ‘Marco’ in (4)– but absent with post-focus topics, see (5). Once again (5) is accounted for if the DPs at issue are instead right-dislocated DPs which lack the contrastive interpretation inherent to lp-topics.

**Licensing of ‘pro’** – Genuine lp-topics are maximally discourse-salient and therefore act as natural referents for null pronouns in successive sentences (Frascarelli to appear, Samek-Lodovici 1996); see (6) where pro in the 2nd sentence corefers with the lp-topic ‘Luca’. The same property does not hold of post-focus topics; see for example (7) where pro may refer to the focused ‘Maria’ but not to ‘Luca’. The divergence follows if post-focus DPs are no more than discourse-anaphoric constituents and as such unable to compete salience-wise against constituents with high discourse prominence such as the focused ‘Mary’ in (7).

In my talk I will consider also additional syntactic properties distinguishing pre- and post-focus topics, such as the base-generated status of pre-focus topics vs. the moved status of right-dislocated constituents. Besides introducing the asymmetries discussed in this abstract and providing an analysis for them, I will examine the implications that this analysis carries for the structural representation of Italian clauses, such as the absence of lp-topic projections lower than left-peripheral focus and the further support that these data lend to Samek-Lodovici’s (2006) claim that focus is structurally always clause-final in Italian.
Native speakers assessing the examples below should pay careful attention in ensuring that main stress falls on focused items alone, especially in examples (4)-(7).

(1) I fiori, li abbiamo dati a Maria.  (obligatory clitic)  
   The flowers, (we) them have given to Mary  
   ‘As for the flowers, we gave them to Mary’

(2) I fiori, a MARIAFOCUS, li abbiamo dati.  (obligatory clitic)  
   The flowers, to Mary, (we) them have given  
   ‘As for the flowers, we gave them to MARY’

(3) A MARIAFOCUS, i fiori, abbiamo dato.  (clitic obligatorily absent)  
   To MARY, the flowers, (we) have given  
   ‘We gave the flowers to MARY’

(4) Luca, MARIAFOCUS, l’ha chiamato; mentre Marco, SOFIAFOCUS, l’ha chiamato.  
   Luke, MARY, him-has called; whereas Mark, SOPHIE, him-has called  
   ‘Luke, it was MARY who called him; whereas Mark, it was SOPHIE who called him’

(5) *MARIAFOCUS, Luca, ha chiamato; mentre SOFIAFOCUS, Marco, ha chiamato.  
   MARY, Luke, has called; whereas SOPHIE, Mark has called  
   ‘MARY called Luke; whereas SOPHIE called Mark’

(6) 1. Luca, MARIA, l’ha chiamato.   2. pro, era in ritardo perché pro, aveva perso il treno.  
   Luke, Mary him-has called.   (He) was in delay because (he) had missed the train.  
   ‘As for Luke, MARY called him’  ‘He was late because he had missed the train’

(7) 1. MARIA, Luca, ha chiamato.   2. *pro, era in ritardo perché pro, aveva perso il treno.  
   Mary, Luke, has called.   (He) was in delay because (he) had missed the train.  
   ‘MARY called Luke’  ‘He was late because he had missed the train’

Selected References
Harmony has long been a subject of interest to phonologists since it bears upon many fundamental debates, such as how much structure phonological representations need and how much underspecification the lexicon allows. In this talk I touch upon both these issues. I argue against theories of harmony that require arboreal or autosegmental structure, and contend that a search-and-copy model achieves the desired empirical coverage without necessitating to hierarchical or tiered structure. I then extend this model by proposing an overwrite mechanism to account for re-harmonization processes such as those found in word games, and finally I discuss the import of this approach to phonology more broadly.

Nevins (2004) provides a typical example of the search-and-copy method of computing harmony. In this type of model, a harmonic suffix enters the derivation without a value for the harmonic feature, then searches for the closest source of valuation. For Nevins, harmony results from the initiator copying the source’s value onto itself, whereas dissimilation occurs when the initiator copies the opposite of the source’s value. Mailhot & Reiss (to appear) have proposed another variant of the search-and-copy theory, shown in (1). Their theory primarily differs from Nevins’ in making use of nested conditional statements within the search and copy algorithms to account for facts that Nevins derives from properties of the vowel inventory.

I show that Mailhot & Reiss cannot account for dissimilation because they make no provisions for copying opposite values, but that given the differences between harmony and dissimilation (see, e.g., Campbell 1999), this is a strength rather than a weakness; dissimilation should be explained as arising from biases in the acquisition process under an Evolutionary Phonology-style framework (Blevins 2004). I further argue that the references to phonological content that Nevins makes (see 2) can be eliminated from the grammar in the spirit of a “substance-free” phonology (Hale & Reiss 2000) while still retaining these important generalizations.

I then discuss the Tuvan word game described by Harrison & Kaun (2000, 2001) with reference to the issue of underspecification, specifically whether harmony is active in roots. In Tuvan (shown in 3), when an infix or pre-specified reduplicative segment is introduced into a harmonic root, non-initial syllables of the word re-harmonize to agree with the added material. In disharmonic roots, however, reharmonization is not triggered. Harrison & Kaun use these data to dissociate underspecification from alternation; however, the import of their conclusion for theories of vowel harmony has remained unexplored. I connect the data to other cases of feature change and explain them while avoiding an appeal to underspecification within harmonic roots.

I conclude by emphasizing that by deriving harmony from search and copy algorithms, it is possible to account for vocalic and consonantal harmony, including re-harmonization processes, without recourse to arboreal or tiered phonological representations, and without reference to phonological content. Furthermore, the mechanisms put to use in this domain are independently motivated and well-supported in other areas of linguistic theory. These facts argue in favor of the idea espoused by Neeleman & van de Koot (2006), that phonology differs from syntax in being “flat” rather than hierarchical, and also have the effect of reducing demands on “PF in the narrow sense,” the phonological module of the grammar.
(1) SEARCH algorithm (Mailhot & Reiss to appear: 4):
Search(\(\Sigma, \varsigma, \gamma, \delta\)) [When unindexed, \(\varsigma\) and \(\gamma\) are feature specifications; when indexed, they are tokens with those features.]
1. Find all \(x\) in \(\Sigma\) subsumed by \(\varsigma\) and index them: \(\varsigma_0, \varsigma_1, \ldots, \varsigma_n\)
2. For each \(i \in \{0, \ldots, n\}\):
   (a) Proceed from \(\varsigma_i\) through \(\Sigma\) in the direction \(\delta\) until an element subsumed by \(\gamma\) is found; (b) Label this element \(\gamma_i\)
3. Return all pairs of coindexed standards and goals, (\(\varsigma_i, \gamma_i\))

COPY algorithm (Mailhot & Reiss to appear: 7)
Identify \(\alpha F\) on \(\gamma_i\) and assign \(\alpha F\) to \(\varsigma_i\) if the set of conditions \(C\) on \(\gamma_i\) are satisfied

(2) Condition linking sonority to opacity/transparency (Nevins 2004: 216)
Implicational Universal: If a neutral vowel of greater sonority is transparent, then one(s) of lesser sonority will be transparent

(3) Tuvan full reduplication (Harrison 1999, Harrison & Kaun 2000, 2001)
Vowel inventory: /i, u, e, o/ alternate with /ɨ, u, a, o/, plus length contrast
General rule: repeat entire base, replacing initial vowel with [a] or [u]

Harmonic bases, with re-harmonization of reduplicant:
   a) idik  idik-adik (*adik)  ‘boot’
   b) teve  teve-tava (*tave)  ‘camel’

Disharmonic bases, without re-harmonization of reduplicant:
   a) maʃina  maʃina-muʃina (*muʃna, *muʃuna) ‘car’
   b) ajbek  ajbek-ujbek (*ujbak) ‘Aibek’

References
In this paper, I discuss the syntax and semantics of the ‘oblique-causer construction’, illustrated with the German example in (1). In German, my main language of exemplification here, the oblique causer bears dative case. A similar construction with identical syntactic and semantic properties as those discussed below can be found in a huge number of languages, e.g. in Russian, Albanian, Greek, Romanian, Bulgarian, Spanish, Italian, … (cf. Cuervo (2003), Rivero (2004), Kallulli (2006)). In all these languages, the causer bears non-structural dative or genitive case (but see the Caucasian languages below). This construction raises then the question of how similar its oblique causer is to a prototypical nominative causer-subject in transitive nom/acc-contexts such as in (2).

In (1) a verb which can undergo the causative alternation (‘break’) combines with a nominative theme and a further dative DP. This string is actually ambiguous between two readings, the ‘affectedness reading’ and the ‘oblique-causer reading’. Here, I concentrate on the latter one which can be enforced by adding an adverb like ‘versehentlich’ (unintentionally). This causative reading has a number of semantic restrictions: (i) Adverbs expressing intentionality are not licensed (1). (ii) The dative DP is necessarily human. (iii) The predicate must be expressing a telic change of state.

It has been argued that oblique case on such non-canonical subjects reflects the subject’s reduced agentivity or intentionality. On this view, the sentence in (1) would have basically the same syntax as the corresponding canonical transitive sentence in (2). The only difference would be that the subject receives “semantic dative” as a marker for its reduced intentionality. This would mean that ‘the man’ in both (1) and (2) is in the same syntactic position, following Kratzer (1996) in SpecVoice, as depicted in (3a, b) (cf. Kallulli (2006) for such a proposal). A detailed analysis of the syntax and semantics of the construction in (1), however, reveals that this cannot be correct.

I propose to derive the properties of the dative causer construction from the assumption that the predicate is underlyingly inchoative and that the dative is applied to the inchoative event via an applicative head as in (4) (such an analysis was first proposed in Cuervo (2003) who, however, does not derive the semantic restrictions of the construction). This applicative head assigns lexical case to its specifier and expresses semantically an abstract, possessive ‘have’-relation between its specifier and its complement (here, the change-of-state event) (cf. Anagnostopoulou (2003), Harley (2002), among many others). The following observations argue against (3b) and in favour of (4):

A) Canonical causatives can also involve an unintentionally acting human subject. Importantly, even if the subject acts unintentionally, an instrumental phrase can still be licensed (5). With oblique causers, however, instrumental phrases are strongly deviant (6).

B) The oblique-causer construction is possible not only with verbs undergoing the causative alternation but also with unaccusative verbs (7a) which never license canonical external arguments/Voice (7b) (cf. Rivero (2004) for corresponding data in Romance and Balkan languages).

C) As disussed by Ganenkov et al. (2007), the oblique causer is not necessarily interpreted as unintentional causer. The construction is compatible with all three scenarios in (8): the first involves an unintentional causer, the second an involuntary facilitator, the third an unexpected, but highly intentionally acting causer (again, this holds across languages).

The semantic properties (i-iii, A-C) follow from the analysis in (4): Applicative ‘have’ is a stative predicate and it is well known that statives do neither license instruments nor intentionality adverbs (He knew the answer (*with the calculator) (*on purpose)). Further, ‘have’-relations (aside from here irrelevant inalienable possession) are known to impose a human restriction. Adverbs expressing nonintentionality seem to be licensed pragmatically: since the choice of the construction makes it impossible to express the default assumption about human causers, we tend to assume the opposite.

On this view, the causative semantics do not originate in the applicative projection itself. Alexiadou et al. (2006) provide evidence that inchoative change-of-state events involve causative semantics as witnessed by the fact that anticausatives and telic unaccusatives crosslinguistically license causer-PPs (9a, b). The structure in (4), therefore, literally means that “the dative DP has/possesses the causative event which leads to the vase being broken”. This abstract possessive relation is compatible with all three scenarios in (8). Note, that B and C can never be expressed with canonical nominative subjects.

Caucasian languages provide further morphological evidence and elucidation. Tsez marks its oblique causer with possessive case (10). In Agul, possession is marked with ad-essive and the oblique causer
is marked with ad-ellative case (11) which literally expresses “movement from a landmark”, i.e. a kind of source. I propose to interpret all oblique causers as underspecified “sources of causative events”.

(1) Dem Mann zerbrach die Vase (versehentlich) (*absichtlich)
   the.DAT man broke the.NOM vase (by mistake) (on purpose)
   Causer reading: ‘The man unintentionally caused the vase to break’
   (Affectedness reading: ‘The vase broke on the man/The vase broke and the man was affected by this’)

(2) Der Mann zerbrach die Vase (absichtlich) / (unabsichtlich)
   the.NOM man broke the.ACC vase on purpose / by mistake

(3) a. [the-man-NOM [ VoiceP [ VP broke the-vase-ACC ]]]
   b. [the-man-DAT [ VoiceP [ VP broke the-vase-NOM ]]]

(4) [the-man-DAT [ ApplP [ VP broke the-vase-NOM ]]]

(5) Der Mann zerbrach die Vase versehentlich mit einem Hammer
   the.NOM man broke the.ACC vase unintentionally with a hammer
   ‘The man unintentionally acted with the hammer so that the vase broke’

(6) Dem Mann zerbrach die Vase versehentlich (*mit einem Hammer)
   the.DAT man broke the.NOM vase unintentionally (with a hammer)

(7) a. Dem Mann verblühte die Blume
   the.DAT man wilted the flower
   ‘The man unintentionally caused the flower to wilt’
   b. *Der Mann verblühte die Blume
      the.man.NOM wilted the flower.ACC

(8) als dem Mädchen die Tür aufging
   when the.DAT girl the.NOM door open-went
   Reading A: The girl accidentally opened the door (because she pushed it with her elbow while playing with her toys on the floor)
   Reading B: (The mother told the girl to hold the door so that the wind could not open it, but her efforts were not enough) The girl accidentally opened the door/let the door open.
   Reading C: (All the children tried but no one could open the tightly closed door; however, it happened so that) The girl finally/eventually managed to open the door.

(9) a. Die Vase zerbrach durch das Erdbeben
   the.NOM vase broke through the earthquake
   ‘The vase broke from the earthquake’
   b. Die Blume vertrocknete durch die Hitze
      the flower wilted through the heat
      ‘The flower wilted from the heat’

(10) uži-q č’ikay y-exu-s (from Comrie (2000))
    boy.POSS glass.ABS II-break-PAST.WIT
    ‘The boy accidentally broke the glass’

(11) baw.a-f-as nek afuzu-ne (from Ganenkov et al. (2007))
    mother.AD-ELAT milk.ABS pour_out-Perf
    ‘Mother accidentally spilled the milk’

Percus 2000 proposes a binding theory for situation-denoting pronouns, in which representational constraints, reminiscent of the Binding Theory for pronominals and reflexives, account for apparent constraints on the binding of situation pronouns. This talk, however, proposes that no constraints are needed to capture these facts; their effects follow automatically, if we revise our understanding of semantic binding in general.

Consider (1). It has two readings, commonly known as the de re (1a) and de dicto (1b) readings. But (1) cannot have the reading paraphrased in (1c). Yet the latter is exactly what we would expect if situation pronouns could be bound by any operator. Percus assumes (3) as the general structure for the readings of (1), where different values for i and j yield the different readings. That is, we coindex the world pronouns with either the λ for the entire sentence or the λ for the embedded clause. (1a) corresponds to i = 2 and j = 1. (1b) corresponds to i = j = 2. The unavailable reading, (1c), corresponds to i = 1 and j = 2.

Percus’s solution, then, is to prohibit, via constraint, i = 1. More generally, he forces the world pronoun associated with a verb to be coindexed only with the nearest λ above it. This is called “Generalization X” in the paper (2), reminiscent of Principles A, B, and C of the Binding Theory.

However, let us question one of the assumptions made in Percus’s paper, namely the presence of the λ operator in the first place. The λ for Percus is a predicate abstractor present in the syntax, which can abstract over any world-denoting pronoun. This is, actually, rather different from the standard assumptions concerning individual-denoting elements, where predicate abstraction is assumed to occur only for traces of movement, not for pronouns. For example, Büring’s recent work (2004a,b) proposes a distinction between the semantics of pronoun binding and that of trace binding.

I propose, therefore, that there is no λ operator in the syntax capable of abstracting over a world pronoun. In addition, I assume that we do not need to insert a world pronoun above the VP. Percus 2000 assumes that such a world pronoun is projected by the verb. However, the only purpose this serves is to prematurely saturate the world argument of the verb, requiring it to be abstracted over by the λ operator. I drop both the projection requirement and the availability of the λ operator.

Instead, world pronouns, which must still be present in the DP, are bound with the help of a binding operator, labeled β, reminiscent of Büring’s (2004a,b) operator for individuals. I generalize it to apply to pronouns of any type, and generalize the assignment function as well; see (4). Each β operator, as well as each pronoun, is indexed with a number and a type. The structure I assume for (1) then is (5). The de re and de dicto readings of (1) correspond to different choices for i in (5). But there is no way to generate reading (1c).

This is not just because there is no world pronoun associated with the verb phrase to be indexed with the higher β. I assume we can freely add a world pronoun if we wish. But if we did, it would saturate the world argument of the verb, and since there is no predicate abstraction for pronouns, there would be no way to abstract over it and hence derive a proposition for the embedded clause. The β operator can only take a proposition and create a proposition; it cannot attach to an element of, say, type t and create a proposition, unlike an abstractor. But we need a proposition there, because the verb thinks requires one as its argument.

My proposal and that in Percus 2000 make sharply different predictions about embedded clauses which are extensional, or which don’t denote propositions, in contrast to those considered so far. Percus predicts that such clauses will still obey Generalization X, and hence still not be able to have a high reading, because they still have verbs which project world pronouns, and these pronouns hence should still be bound by the closest λ. I predict that such clauses would not show any Generalization X-like effects, because since they are extensional, the world argument of the verb in such clauses can be saturated, and the world pronoun that saturates it can be bound from an arbitrarily far away β.
The facts bear out my proposal. Consider the classic “Russel Comparative” example (6). The embedded clause here is, in fact, an extensionally interpreted embedded clause, and hence a good test for our predictions. It is well known that (6) allows a reading where the speaker does not have a contradictory belief. This reading, assuming arguments in Heim 2000, must arise from a world pronoun in the embedded clause which is bound by the matrix β. For Percus, we would expect this reading to be prohibited.

(1) Mary thinks that my brother is Canadian.
   a. Mary thinks that the person who is actually my brother is Canadian (though she may not know he’s my brother).
   b. Mary thinks that the person who she assumes is my brother is Canadian (though he may not be my brother).
   c. #Mary thinks that some person who is actually Canadian is my brother (though she might not think that the person is Canadian).

(2) Generalization X: The situation pronoun that a verb selects for must be coindexed with the nearest λ above it.

(3)

(4) $[[\beta_{<n,s>} \text{ XP}]^g = \lambda_{Xt}. [[\text{ XP}]^g_{<n,s> \rightarrow x}(x)]$

(5)

(6) I thought your yacht was longer than it is.

(7)
Compensatory Lengthening via Mora Preservation in OT-CC

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Problem: Hayes’s (1989) analysis of compensatory lengthening (CL) via mora preservation gave major impetus to the paradigm shift from slot-based theories of representation (McCarthy 1979, Clements and Keyser 1983, Levin 1985) to weight-based theories (Hyman 1985, McCarthy and Prince 1986). Implementing the mora preservation intuition in classic Optimality Theory (Prince and Smolensky 1993/2004) poses both problems general to cases of counter-bleeding opacity (Kiparsky 1973, McCarthy 1999) as well as those specific to mora faithfulness (Sprouse 1997, Topintzi 2007). These problems are illustrated by a specific example from Komi Ižma (KI), where deletion of /l/ in coda position productively gives rise to lengthening of the preceding vowel (in both the verbal paradigm in (1) and nominal paradigm in (2)). While the Hayesian derivation in (3) traverses two fully pronounceable forms, (3c) and (3e), classic OT requires that alteration of the underlying form proceeds in a single step. Since the entire set of pronounceable forms are evaluated against a set of constraints, the forms in (3c) and (3e) would compete against each other as possible outputs of the UR in (3a). In order for (3e) to be selected, there must be a constraint or set of constraints that favors it over (3c) and rules out all other pronounceable forms. Although the effects of the coda-/l/ deletion rule in (3d) can be mimicked via the interaction of constraints (see Kavitskaya 2002 for one implementation), the OT grammar that favors (3e) over (3c) also favors (4a). Thus, the problem for classic OT is that no ranking of constraints prefers (4b) to both (4a) and (4c). Finally, if we invented a new markedness constraint that preferred the surface form of (4b) to (4a) by virtue of, for example, favoring the long vowel in (4b), then the grammar would erroneously predict that [kɨɨ.licenses] would surface for /kɨli/ ‘I heard’, instead of the attested form [kɨli].

Solution: Optimality Theory with Candidate Chains (OT-CC), a variety of OT developed in McCarthy (2007) to deal with counter-bleeding capacity, evaluates the terminal link (TL) of candidate chains, which consist of a fully faithful candidate (FFC); additional links which meet the requirements of gradualness and local optimality, defined in (5); and an ordering of faithfulness violations or LUMs (Local Unfaithful Mapping). Over the course of valid candidate chain construction a consonant from the UR may be assigned a mora before being deleted in a subsequent link, capturing the key insight of the Hayesian analysis. Construction of the optimal candidate chain for KI /kɨl-nɨ/ in OT-CC, however, differs in crucial respects from the derivation in (3). Since every link in the chain must be a pronounceable output, a consequence of local optimality, intermediate steps containing stray prosodic elements, as in (3d), or extraprosodic segments, as in (3b), are not valid links in a chain. Further, since faithfulness violations are limited to one-per-link, an OT-CC chain cannot jump from (3c) to (3e) as this would entail violations of both MAX(SEGMENT) and NO SPREAD(µ), two LUMs in a single link. Thus, the only possible solution in OT-CC is to first spread the mora associated with the coda consonant to the vowel, resulting in (4d), and then delete the consonant.

Novel Predictions of the Analysis: Since mora spreading must constitute harmonic improvement over a structure with a consonant-headed mora, languages with CL must rank *Cµ over NO SHARED MORA (6). This grammar leads to the novel prediction that all coda consonants (including those which are not CL triggers) in languages with CL of the KI type employ a shared mora representation, as in (4d). This results in a tighter typological prediction than was available in past accounts. de Chene and Anderson (1979) predict that CL can only occur in languages with a vowel length contrast; Hayes (1989) extends the prediction to include, in principle, any language with a phonological weight contrast. The prediction of OT-CC is that CL can only occur in languages that require a shared-mora representation of coda consonants. In light of work by Broselow et. al. (1997) showing that the phonetic implementation of the shared-mora structure in (4d) may differ systematically in vowel duration from the structure in (4c), the OT-CC solution to CL also generates an instrumentally testable prediction. Lastly, since the predictions stem directly from the architecture of the theory their implications extend beyond the study of CL. That moras must spread before the segments they dominate can delete, a direct consequence of gradualness, constitutes a specific case of the more general prediction that spreading precedes deletion.
(1) Verbal paradigm (Harms 1968)

<table>
<thead>
<tr>
<th>STEM</th>
<th>1 SG. PAST</th>
<th>INFINITIVE</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>liy</td>
<td>liyi</td>
<td>liyni</td>
<td>'shoot'</td>
</tr>
<tr>
<td>kil</td>
<td>kili</td>
<td>ki:ni</td>
<td>'hear'</td>
</tr>
</tbody>
</table>

(2) Nominal paradigm (Harms 1968/Batalova 1982)

<table>
<thead>
<tr>
<th>STEM</th>
<th>ELATIVE SG</th>
<th>NOM SG</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>gort</td>
<td>gor.tys</td>
<td>gort</td>
<td>'house'</td>
</tr>
<tr>
<td>vəl</td>
<td>va.lys</td>
<td>və:</td>
<td>'horse'</td>
</tr>
</tbody>
</table>

(3) Hayesian derivation for /kɨl-nɨ/ ‘to hear’

\[
\begin{align*}
\text{(a)} & \quad \mu \quad \mu \quad \sigma \\
\text{(b)} & \quad \mu \quad \mu \quad \sigma \\
\text{(c)} & \quad \mu \quad \mu \quad \sigma \\
\text{(d)} & \quad \mu \quad \mu \quad \sigma \\
\text{(e)} & \quad \mu \quad \mu \quad \sigma \\
\end{align*}
\]

(4) Candidates for surface realization of /kɨl-nɨ/:

\[
\begin{align*}
\text{(a)} & \quad \mu \quad \mu \quad \sigma \\
\text{(b)} & \quad \mu \quad \mu \quad \sigma \\
\text{(c)} & \quad \mu \quad \mu \quad \sigma \\
\text{(d)} & \quad \mu \quad \mu \quad \sigma \\
\end{align*}
\]

(5) Conditions on link formation (McCarthy 2007)

(a) **Gradualness**: successive forms in a chain must monotonically increase in unfaithfulness relative to the input. The monotonic increase has a slope of one LUM (local unfaithful mapping) per form in the chain (pg 49).

(b) **Harmonic improvement (via local optimality)**: “every non-initial form in a chain is more harmonic than its predecessor” (pg 50)

(6) Constraints on Mora Association (Broselow et al. 1997)

a) **NoSharedMora**: Moras should be linked to single segments.
b) **C*µ**: The head of a mora must be a vowel.

**Selected References**


The Tense of Resultatives — The Case of Korean

Ji Young Shim & Marcel den Dikken (CUNY)

1 English resultatives of the type in (1a–c) arguably involve a small-clause complementation structure illustrated in (2) (Hoekstra 1988 i.a.). This structure directly explains (a) the predication relationship between the resultative secondary predicate and the postverbal noun phrase; (b) the fact that English-type resultatives are subject to ‘Simpson’s Law’ (Simpson 1983): in (1b) the floor, not Jim, ended up white as a result of the painting event; (c) the fact that the postverbal noun phrase is not the internal argument of the verb: in (1c) the theorem was not proven; and (d) the fact that selectional restrictions normally imposed by a verb on its direct object are suspended in resultatives: Dutch sloeg ‘hit’ desires a sentient direct object, but (1d) is fine with stuk ‘broken’ included because het kopje ‘the cup’ is not the direct object of the verb in the resultative.

2 Korean has counterparts to English (1a) and (1b) (see (3a) and (3b,b’), resp., but no direct renditions of (1c) or Dutch (1d). In Korean (3a), mok is and must be nominative: (3a’) is ungrammatical. In (3b,b’), patak is either accusative or nominative, but the two versions are not semantically equivalent (pace Hong 2005). Accusative (3b) can only mean that Jim’s paint brush directly targeted the floor: to express that the floor accidentally got covered with white paint as a result of Jim’s clumsily painting the ceiling, Korean resorts to nominative (3b’). This suggests that patak-ul ‘the floor-ACC’ in (3b) is the thematic object of the verb; unlike in English-type languages, a verb in Korean cannot select a resultative small-clausal complement with an accusative ECM-subject. This also accounts for the status of (3c,d) (contrast (1c,d)), and rules out (3a’) as a rendition of (1a): accusative mok-ul can neither serve as the internal argument of V (which is unergative) nor as the ECM-subject of V’s small-clause complement (V cannot take SC in Korean resultatives).

3 With the above conclusions in place, this paper seeks answers to the following questions: (a) what is the analysis of Korean resultatives of the type in (3a), (3b) and (3b’)? (b) why does Korean disallow small-clause complementation in resultatives? (c) why does English disallow the structures Korean assigns to its resultatives? Our answers to these questions cluster around the structural proposal in (4): Korean resultative secondary predicates project clausal, TP-level constituents adjoined to some (extended) projection of V. The subject of the adjoined TP may be overt (and nominative, its Case checked against T) or null (pro). The null subject is identified by a local controller, with locality determined in terms of minimal c-command: the subject is the controller if TP is adjoined to vP; the object (which in Korean (OV) minimally raises overtly to the specifier of vP, ‘tucking in’ below the subject’s base position) is the controller if TP is adjoined to VP.

4 Evidence for the difference in structural height of subject-controlled and object-controlled resultatives in Korean comes from VP-topicalization: subject-controlled resultatives can be stranded under VP-topicalization but object-controlled resultatives cannot (cf. e.g. the fact that (5b) only supports a subject-controlled reading, while (5a) is ambiguous). Evidence for a null pronounal subject of the resultative comes from a variety of sources, including the suspension of Simpson’s Law in Korean, selectional restrictions, honorification, and, most strikingly, the unavailability of an idiomatic interpretation for Korean (6b) (contrast English (6a)): ‘Jim’s liver’ is the thematic complement of the matrix verb controlling the null subject of the secondary predicate ‘out of his stomach’; idiom chunks fail as controllers. Finally, evidence for the presence of tense in the extended projection of Korean resultative secondary predicates is derived from the distribution and scope of negation in resultatives (cf. (7)–(8)). Korean allows a negation on the resultative secondary predicate two different scopes vis-à-vis the inchoative marker -ci attached to the resultative: it either scopes directly over the secondary predicate alone (the (i)-readings), or it scopes over aspectual -ci (ii). While (i) may involve constituent negation (‘not-clean’), the (ii)-readings feature a sentential negation. The sentential domain over which negation takes scope in the (ii)-readings is the clausal constituent headed by the resultative secondary predicate. Assuming with Zanuttini (1996) that all sentential negation is dependent on a local T-node, we conclude that the extended projection of the resultative secondary predicate in Korean resultatives includes a T-node. This T licenses nominative subjects, subject to pro-drop whenever they are recoverable from context.

5 The previous sections demonstrate that Korean represents resultative secondary predicates as adjuncts (either to the root-VP or to vP) and provides them with a local T that licenses them within the adjoined TP. These two properties are intimately related, in a way that answers questions (b) and (c) from §3 with an appeal to the role of tense. Korean can license resultative secondary predicates as adjuncts because it provides these predicates with a local T; English-type languages cannot so license resultatives, hence are compelled to project them as complements, thereby enabling incorporation of the resultative into the matrix verb’s T-chain (Guéron & Hoekstra 1995); licensing resultative secondary predicates by a local T is more economical than the formation of a T-chain, whence the fact that small-clause complementation is unavailable in Korean.
(1) a. Jim cried his throat hoarse
b. Jim painted the floor white
c. Jim proved the theorem false
d. Jim sloeg het kopje (stuk)

(2) \[ V \{ [SC \{ DP \{ SUBJECT \} \} \} [XP \{ PREDICATE \}] \} \]

(3) a. Jim-i mok-ul shi-key wul-ess-ta
   Jim-NOM throat-NOM become.hoarse-KEY cry-PAST-DECL

b. Jim-i patak-ul hayah-key chilla-ess-ta
   Jim-NOM floor-ACC white-KEY paint-PAST-DECL

(4) \[ vP \]

\[ \begin{array}{c}
\text{TP} \\
\text{vP} \\
\text{DP} \\
\text{\{subject-controlled\} resultative} \\
\theta_{ext} \\
\end{array} \]

\[ \begin{array}{c}
v \\
\text{TP} \\
\text{vP} \\
\text{\{object controlled\} resultative} \\
\theta_{tm} \\
\end{array} \]

(5) a. Susana-ka Jim-ul sonmok-i aphi-key tayli-ess-ta
   (lit.) ‘Susanan hit Jimj the wrist in pain’

b. [Jim-ul tayli-ki]-nun Susana-ka sonmok-i aphi-key ha-ess-ta
   Jim-ACC hit-NM-TOP Susana-NOM wrist-NOM in.pain-KEY do-PAST-DECL
   (lit.) ‘hit Jimj, Susanan did the wrist in pain’

(6) a. Susana pulled [the cat out of the bag] \(\rightarrow\) OK as an idiom

b. Susana-ka Jim-uy kan-ul pay pakk-ey nao-key tangki-ess-ta
   Susana-NOM Jim-GEN liver-ACC stomach outside-LOC exit-KEY pull-PAST-DECL
   ‘Susana pulled Jim’s liver [pro out of his stomach]’ \(\rightarrow\) literal only

(7) a. Jim-i thakca-lul kKaykkusha-ci anh-key takk-ess-ta
   Jim-NOM table-ACC clean-INCH NEG-KEY wipe-PAST-DECL

b. Jim-i thakca-lul pyomyen-i kKaykkusha-ci anh-key takk-ess-ta
   Jim-NOM table-ACC surface-NOM clean-INCH NEG-KEY wipe-PAST-DECL
   (i) ‘Jim wiped the table such that it/its surface got unclean/dirty’ [pro (top) INCH NOT clean]
   (ii) ‘Jim wiped the table but it/its surface did not get (fully) clean’ [pro (top) NOT INCH clean]

(8) a. Jim-i mokoyok-ul kKaykkusha-ci anh-key ha-ess-ta
   Jim-NOM bath-ACC clean-INCH NEG-KEY do-PAST-DECL

b. Jim-i mokoyok-ul pal-i kKaykkusha-ci anh-key ha-ess-ta
   Jim-NOM bath-ACC feet-NOM clean-INCH NEG-KEY do-PAST-DECL
   (i) ‘Jim took a bath such that he/his feet got unclean/dirty’ [pro (feet) INCH NOT clean]
   (ii) ‘Jim took a bath but he/his feet did not get (fully) clean’ [pro (feet) NOT INCH clean]

Guéron & Hoekstra 1995 ‘The temporal interpretation of predication’ (Cardinaletti/Guasti eds, Small clauses) • Hoekstra 1988 ‘Small clause results’ (Lingua) • Hong 2005 Exceptional case-marking and resultative constructions (diss UMD) • Zanuttini 1996 ‘On the relevance of tense for sentential negation’ (Belletti/Rizzi eds, Parameters and functional heads)
A new look at domains and phases: evidence from t-palatalization in Oji-Cree

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University of Toronto

The interaction of phonological processes with morphosyntactic structure has been the topic of a long-standing debate in the literature (e.g. Marantz (1997), Marvin (2002), Bachrach and Wagner (2007)), current incarnations of which include various proposals regarding the use of phonological processes as diagnostics for phase boundaries (e.g. Piggott and Newell (2006) among others). In this paper, I argue that t-palatalization in Oji-Cree (Algonquian) appears to be one such process. However, not only does it provide a diagnostic for phase boundaries within the verbal complex, but, most importantly, it also provides evidence for the existence of two different types of morphosyntactic domains, only one of which is called a phase, while the other one is similar to a phase in many ways but involves a weaker boundary.

The process of t-palatalization in Oji-Cree, involves the change of [t] to [tʃ] (spelled c) on the morpheme boundary before epenthetic i (1b). This process has been considered to be archaic by most Algonquianists (e.g. Wolfart 1973) due to a large number of exceptions (e.g. (1a)). I show that this process, in fact, is synchronically active and quite productive, and that the apparent exceptions can be easily accounted for in a systematic way. I argue that palatalization is primarily determined by the nature of the adjacent morphosyntactic domains. The morpheme on the right of the boundary can be of two types: a lexical transitivity suffix (-pahtoo ‘run’ in (1b)) (‘concrete final’ in the traditional Algonquian literature) or a purely category defining transitivity suffix (e.g. the suffix -ke in (1a) which marks animate intransitive verbs) (‘abstract final’). I show that when epenthetic i appears on the boundary between a root and a lexical transitivity suffix, it triggers palatalization on the root-final t (1b), but when it appears on the boundary between a root and a purely category defining suffix, it fails to trigger palatalization (1a). The status of transitivity suffixes has been long debated in the Algonquian literature with one view stating that all or most transitivity suffixes are light-v’s (Brittain 2003, Hirose 2003, Mathieu 2006), and another view that only category defining transitivity suffixes are light-v’s, (Piggott and Newell 2006). I assume the latter position, and argue that the inconsistent behavior of epenthetic i’s with respect to palatalization is due to the morphosyntactic difference between the two kinds of transitivity suffixes. In particular, I argue that purely category defining suffixes, being light-v’s, combine with a root to form a single morphosyntactic domain (2a), while lexical transitivity suffixes consist of a light-v plus additional lexical material (2b), and form independent morphosyntactic domains. I argue that the epenthetic i on the boundary between domains (2b) is a marker of a domain edge, and since it appears earlier in the derivation (when the domains are formed), it triggers palatalization on the preceding t of the root. The epenthetic i within a single morphosyntactic domain (2a) appears for syllabification purposes, and thus appears much later, after the phonological rules apply, and does not trigger palatalization.

I further argue that although lexical transitivity suffixes constitute morphosyntactic domains, these domains cannot be called phases. Drawing on Piggott and Newell (2006), who convincingly argue that vowels in hiatus in Ojibwe are tolerated only at the phase boundary, I show that hiatus is not tolerated on the boundary between a root and a lexical transitivity suffix. Thus, this boundary, which is strong enough to be considered a domain boundary but not strong enough to tolerate vowels in hiatus, is not a phase boundary.

My analysis of the morphosyntactic status of transitivity suffixes is supported by their prosodic status. It has been argued by Branigan et. al (2005) that monosyllabic transitivity suffixes prosodify together with the preceding material, while suffixes that contain more than one syllable prosodify independently. Since lexical transitivity suffixes normally consist of two or more syllables, while category defining ones are generally monosyllabic, the above generalization about prosodification of these elements can be said to follow directly from their morphosyntactic status. Namely, those suffixes that constitute independent prosodic domains also constitute morphosyntactic domains, while suffixes that are prosodically dependent on the preceding material do not constitute morphosyntactic domains.

Thus, the process of t-palatalization in Oji-Cree provides evidence for the existence of two types of morphosyntactic domains, which directly correlate with prosodic domains. Although both types of domains are relevant to phonological processes, only one of them can be called a phase.
Examples

(1) a. piintike
    piint- i-ke
    inside-i-VAI
    ‘S/he enters.’

b. pinetpahtoo
    piint- i- pahtoo
    inside-i-run VAI 3
    ‘S/he is running inside.’

(2) a. vP
    \[\sqrt{vP}\]
    piint-i
    ‘inside’
    ke
    VAI

b. vP
    \[\sqrt{vP}\]
    piinc-i
    ‘inside’
    pah
    ‘run’
    too
    VAI

(3) a. Pwd
    \[\sqrt{[piintike]_{vP}}\]

b. Pwd Pwd
    \[\sqrt{[piint]_{vP} [pahtoo]_{vP}}\]

References


**Gender on bound pronouns**

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**Introduction.** It has been argued on the basis of examples with gender-neuter nouns like (1) that gender features should carry presuppositional semantics [Cooper, Heim]. [Heim], among others, also argues that examples like (2) show that gender features cannot always be present at LF. If they were, they should restrict the comparison set induced by *only* to include female individuals only (all alternatives to *Mary* be applied to the predicate $\lambda x. x$ is female.$x$ handed in $x$’s assignment). [Heim] proposes (3) together with the assumption that bound pronouns can enter the derivation featureless to capture the facts. *her* in (2) has only acquired [fem] by FT at PF, hence it is not present at LF. *her* in (1) was base-generated on the pronoun, so it is present at LF. Since *student* is gender-neuter, no feature is transmitted at PF (and no contradiction between features can arise). On the basis of examples like (4), [Percus] argues that even in examples like (1) the relevant features are located on the DPs, not the pronouns (i.e. there are no gender-neuter DPs in English); since (4) is felicitous in all contexts where (2) is, the gender feature must be the result of agreement (FT). This can only be so if *the student* bears a [fem] feature. If this is true for (4), it can also be true for (1). If Percus is right, there is no empirical argument to assign any semantics to gender features on bound pronouns at all; it is possible to adopt the strong thesis in (5). The claims. In this paper I argue on the basis of Greek facts that i. the strong thesis in (5) (or its opposite) cannot be adopted, ii. Feature Transmission cannot be obligatory as in (3), iii. the presence/ absence of gender features on bound pronouns at LF depends on morphological properties of the binder, and iv. ellipsis is the most reliable test to distinguish between presence/ absence of gender features at LF. The argument. Greek is a language with a grammatical gender system (feminine, masculine, neuter). Gender agreement is always agreement with grammatical, not natural, gender, as in (6). This is not true for the pronoun in (7); it can be both neuter or feminine. [fem] on the pronoun in (7) cannot be the result of agreement. Hence, the pronoun must enter the derivation with [fem] in place, contra (5). Moreover, if FT is obligatory, a mismatch should arise after [neu] is transferred to *tis* ‘her’ which is already specified for [fem]. If the feminine pronoun in (7) is not the result of agreement, then it must be present at LF. (8), with a neuter-gender noun specified for [neu], is predicted to restrict the comparison set to female individuals only. The prediction is not borne out. The only proposal that could capture (8) is presented in [Heim] as an alternative to FT. Examples with *only* involve the calculation of focus-values. The discussion of (2) above depended on the fact that the presuppositions triggered by the gender features are relevant for calculating the alternatives to the subject. However, if we set assertion and presupposition values apart and state the semantics of *only* as in (9), the absence of restrictions in (2/4) follows even if gender features carry presuppositional semantics; *only* doesn’t care about presuppositional values. The same is true of (8), as in (10), even if agreement cannot be the source of [fem] on the bound pronoun. Notice that if presuppositions are irrelevant for the calculation of *only*-examples, it is now possible to adopt the strong thesis in (11). There is no evidence against it any more. Ellipsis. I argue that evidence against (11) comes from ellipsis examples. The alternative to FT (and FT itself) predicts that in examples like (12a/b) sloppy identity will be licensed; the focus-condition of [Rooth] will be satisfied as long as presupposition values are made irrelevant, as in (13). Cases of gender mismatches in Greek, however, show that the condition should be stricter. In (14), ellipsis is licensed as long as the gender features on the pronouns in the antecedent and the elliptical clause carry the same specification. (13), however, (and FT itself) licenses sloppy readings in both (14a) and (14b). The same argument can be made for example (15), where the elliptical clause necessarily contains a [fem] pronoun. The contrast between (12a:possible agreement between binder and pronoun in the antecedent clause) and (14a:impossible agreement between binder and pronoun in the antecedent clause) is the same as between (12a) and (16) where the binder bears no overt gender specification at all. The alternative to FT overgenerates in all these examples. We can solve the ellipsis problem by imposing a strict lexical identity condition at LF on the gender features of the pronouns in the antecedent and the elliptical clause. Whether gender features on bound pronouns can be present at LF or not, depends on the morphological properties of the binders. Conclusions. Greek has provided sufficient evidence that gender features at LF should both, at some cases, be present at LF, and, at some other cases, not be present at LF. The apparent contradiction can be solved if we adopt both FT (sensitive to the agreement/ morphological properties of the binders) and its alternative, together with a strict lexical identity condition on ellipsis.
(1) Every student handed in her assignment.
(2) Only Mary handed in her assignment. (no presupposition failure if a male in the comparison set)
(3) Feature Transmission (FT) under variable binding:
   In the derivation of PF, all features of a DP must be copied onto all variables that it binds.
(4) Only the student decorated her room. (no presupposition failure if a male in the comparison set)
(5) Gender features on bound pronouns are always the result of FT.
   (i.e. all bound pronouns enter the derivation featureless w.r.t gender)
(6) Afto to koritsi ine poli eksipno / *eksipni.
   this.neu the.neu girl.neu is very smart.neu / smart.fem
   ‘This girl is very smart.’
(7) Afto to koritsi ajapai poli ti mitera tis/ tu.
   this.neu the.neu girl.neu loves very the mother her/ its
   ‘This girl loves her mother a lot.’
(8) Mono to melos tis omadhas ‘X’ zitise na tin plirosume.
   only the.neu member.neu the.gen team ‘X’ asked subj her pay-we
   ‘Only the member of team ‘X’ asked us to pay her.’ (no presupposition failure if a male in the comparison set)
(9) ‘only S’ (Heim 2005, alternative to FT)
   a. assertion value: that all elements of S’s focus value except S’s assertion value are false.
   b. presupposition value: assertion value of S and presupposition value of S
   c. focus value: singleton of assertion value
(10) ‘melos tis omadhas X zitise na tin plirosume’
   LF: the.neu member.neu λx.x asked us to pay fem-x
   a. assertion value: the member of team ‘X’ asked us to pay x & x=the member of team ‘X’
   b. presupposition value: the member of team ‘X’ is female
   c. focus value: {that x asked us to pay x}
(11) All bound pronouns enter the derivation specified for gender.
   (i.e. gender features on bound pronouns are always present at LF)
(12) a. I dhikijoros mu ajapai ti mitera tis ke o Janis episis. (sloppy possible)
   the.fem lawyer      my loves  the mother her and the John too.
   ‘My lawyer loves her mother a lot, and John does too’
   b. Mary loves her mother, and John does too. (sloppy possible)
(13) Ellipsis is licensed when the assertion value of the antecedent clause is a member of the focus value of the elliptical clause.
(14) a. Afto to koritsi ajapai poli ti mitera tis, ke o Janis episis. (sloppy impossible)
   this.neu the.neu girl.neu loves very the mother her and the John too
   ‘This girl loves her mother a lot, and John does too.’
   b. Afto to koritsi ajapai poli ti mitera tis, ke i Maria episis. (sloppy possible)
   this.neu the.neu girl.neu loves very the mother her and the Mary too
   ‘This girl loves her mother a lot, and Mary does too.’
(15) To melos tis omadhas ‘X’ zitise na tin plirosume, ke to melos tis omadhas ‘Y’ episis.
   the.neu member.neu the team ‘X’ asked subj her pay-we and the.neu member the team ‘Y’ too
   ‘The member of team ‘X’ asked us to pay her, and the member of team ‘Y’ did too.’
   (sloppy only possible if the member of team ‘Y’ is female)
(16) *Kathe dhikijoros ajapai ti mitera tis ke o Janis episis. (sloppy impossible)
   every lawyer      loves the mother her and the John too.
   ‘Every lawyer loves her mother a lot, and John does too.’
Heim, I. 2005. Features on bound pronouns. Ms. MIT.
Relativism and the De Se Interpretation of PRO

**Background:** Chierchia (1989) observed that PRO is obligatorily interpreted *de se*. For example, (1) must mean that Pavarotti believes that he himself is a genius, and could not be used in a context where Pavarotti is listening to a recording of a singer and thinks to himself, “That singer is a genius,” unaware that the singer is actually Pavarotti himself (and similarly for (2)).

In this way PRO is similar to shiftable indexicals in languages such as Amharic (Schlenker 1999, 2003) and Zazaki (Anand & Nevins 2003). In these languages, indexicals such as ‘I’ or ‘you,’ when embedded in a speech or attitude report, can refer to the speaker or addressee of the reported utterance or attitude, rather than the matrix context. For example, Amharic ‘I’ in (3) can refer to the embedded speaker, John.

Observation: Although both PRO and shifted indexicals are obligatorily interpreted *de se*, there is an important difference between them. In cases where one speech or attitude report is embedded under another, typically shiftable indexicals may shift to the higher speaker or attitude holder (in which case they must be interpreted *de se* with respect to that individual), whereas PRO is always interpreted *de se* with respect to the most immediately embedding speech or attitude predicate. For example, on one possible reading of (4), the Zazaki indexicals ‘I’ and ‘you’ can refer to the speaker and addressee of the higher speech report, Ali and Fatima. In contrast, (5) can only mean that Sue wants Bill to want to be an x such that x goes to the party, not that Sue wants to be an x such that Bill wants x to go to the party.

In this way, the behavior of PRO more closely resembles properties of epistemic modals discussed by Stephenson (2007). Stephenson observes that when an epistemic modal *might* or *must* is embedded under an attitude predicate such as *think*, it is linked to the attitude holder; that is, the “knower” (person whose epistemic state is being expressed) shifts to the attitude holder. For example, (6) can only mean that Sue thinks it’s compatible with her (Sue’s) knowledge that it’s raining. Moreover, when one attitude report is embedded under another, an epistemic modal must be linked to the most immediate attitude holder. For example, *might* in (7) can only express Mary’s knowledge.

Adding to this parallel is the fact that the shifted knower of epistemic modals in examples like (6)–(7) must be interpreted *de se* (an observation which Stephenson attributes to Pranav Anand p.c.). For example, (8) is odd in the context given, showing that it cannot mean that Sam thinks that it’s compatible with the knowledge of the man on the radio that it’s raining, even if the man happens to be Sam himself. This fact remains when the attitude report is further embedded, as illustrated in (9).

Proposal: In this paper, I extend Stephenson’s (2007) analysis of epistemic modals to PRO. Following Lasersohn (2005), I assume that that the truth of a sentence is relativized to an individual “judge” parameter, thus treating propositions as sets of world-individual pairs rather than sets of worlds (i.e., type <s,et> rather than <s,t>). Stephenson treats “might p” as being true at a world-individual pair <w,x> iff it is compatible with x’s knowledge in w that it’s raining. Extending this, I propose that at a world-individual pair <w,x>, PRO simply refers to x, as shown in the lexical entry in (10). (This is the same as Stephenson’s “PROJ,” which she posits as an implicit argument for *fun* and *tasty*.) I combine this with lexical meanings for *think* and *want* based on Lewis’s (1979) notion of doxastic alternatives, as in (11), and an analogous notion of “want alternatives” as in (12) (and similarly for other attitudes). This captures both the obligatory *de se* interpretation of PRO and the fact that it must be linked to the most immediate attitude holder. For example, (5) is predicted to mean that in all of Sue’s “want alternatives” <w’,y> in the actual world, all of Bill’s want alternatives <w”,z> in w’ are such that z goes to the party in w”.

In the remainder of the paper, I explore to what extent this approach generalizes to other control constructions. In particular, I show that it can be extended to object control with predicates like *convince* and *persuade* as in (13), and can be modified to allow for “partial” control cases such as (14), but cannot easily be extended, for example, to extensional adjuncts as in (15).
Examples:

(1) Pavarotti crede di PRO essere un genio. [Italian]
Pavarotti believes COMP PRO be a genius.
‘Pavarotti believes that he’s a genius.’ [Lit.: “Pavarotti believes to be a genius”]

(2) Pavarotti wants PRO to be a genius.

(3) John jiagna n-ni yil-all [Amharic]
John hero COP.PRES-ls says-3sm
‘John says that {I am, he is} a hero.’ [Lit: “John says that I am a hero.”]

(4) Ali Fatima-ra va ke Rojda Bill-ra va ez to-ra miradiša [Zazaki]
Ali Fatima-to say-PERF that Rojda Bill-to said I you-to angry.be.PRES
[1 possible reading] ‘Ali said to Fatima, “Rojda said to Bill that I am angry at you”’
[Lit: Ali said to Fatima that Rojda said to Bill that I am angry at you]

(5) Sue wants Bill to want PRO to go to the party.

(6) Sam thinks it might be raining.

(7) Sam thinks that Mary thinks it might be raining.

(8) [Context: Sam is a disgruntled NASA spokesperson. He makes a false announcement on a radio show that there is new evidence of water on the moon. He is fired, and goes home to drink himself to oblivion. He gets so drunk that when he hears a clip of his own interview on the radio, he doesn’t realize that the speaker is him. He says to himself, “Wow, that idiot doesn’t know that there’s no water on the moon!”]
# Sam thinks there might be water on the moon.

(9) [Context: As in (8), but Mary hears what Sam says to himself about “that idiot.”]
# Mary thinks that Sam thinks there might be water on the moon.

(10) \[\text{[PRO]}_w^x = x \]

(11) \[\text{[think]}_w^x = [\lambda z_c . [\lambda p_{s,et} . \forall w',y>\in \text{Dox}_{w,x} : p(w',y) = 1] ] , \]
where \(\text{Dox}_{w,x} = \{w',y>: \text{it’s compatible with what x believes in w that x is y in w'}\} \)
and \(<s,et>\) is the type of a proposition

(12) \[\text{[want]}_w^x = [\lambda z_e . [\lambda p_{s,et} . \forall w',y>\in \text{Want}_{w,x} : p(w',y) = 1] ] , \]
where \(\text{Want}_{w,x} = \{w',y>: \text{it’s compatible with what x wants in w for x to be y in w’}\} \)

(13) Sue persuaded Sam PRO to go with Mary to the movies.

(14) Sue wants PRO to meet on Tuesday.

(15) Sue walked down the street [PRO singing].

References:
Subject Islands: Cyclicility of Derivation and Intermediate Movement to Edges

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1. While the opacity of adjuncts is cross-linguistically fairly stable and robust, subjects do show a considerable degree of variation, most notably, subject-in-situ languages (and constructions) lack a subject island effect (see [5], [12], [10]). This has lead to the view that the account of subject islands must be different from that of adjunct islands (contra a.o. [13], [14], [9]). The most prominent view is to attribute the islandhood of (ex situ) subjects to a ‘Freezing Effect’ that movement gives rise to: (i) chain-based: e.g., [12] and [10], (ii) occurrence-based: e.g., [8].

2. (i) is unformulable within the current derivational minimalist theory that admits no chains, nor ‘copies’ as distinct syntactic objects. (ii) is stipulative in nature, and needs to be complemented with further stipulations to take care of the transparency of in situ subjects. Empirically, the ‘freezing’ account makes the prediction in (2).

Chomsky’s [2] observations, however, point in exactly the opposite direction: while underlying subjects do block subextraction, underlying objects don’t (3), and subextraction is available to underlying subjects if they undergo raising (4). Chomsky’s account of the observations in (3–4), which is built on assumptions (5a) and (5b) about the C-T phase, has two major shortcomings. First, it introduces counter-cyclicity in the derivation: movement to TP occurs at a stage when TP is already contained in CP. Second, it is not actually explained why an underlying subject should be opaque in its base position (vs. an underlying object); it is merely speculatively related to the fact that it is located within a phase Edge (of vP). But even so, the non-opacity of in situ subjects is not accounted for.

3. In this paper I present a novel account of subject islands that maintains the restrictive hypothesis of strict cyclicity of derivation, and assumes that intermediate movements to phase edges (IME) are a Last Resort operation, in the sense of (6). (6) is a view advocated a.o. in Bošković [1], who argues that intermediate movements to (phase) edges (=IME) are not driven by feature-checking (of an [EPP]/[OCC]). (6) entails that IME can only occur immediately before applying Spell Out, hence it is preceded by any feature-checking movements induced by probes. It also follows that an α cannot undergo IME to a phase edge E from a position inside E. A consequence of (6) concerning DPs, which, as goal phrases, are Spelled Out as soon as they are fully checked (cf. [11]; [4], and [7]), is that movement to the edge of a DP will be licensed by Last Resort only at the stage when the (head of the) DP is fully checked, and the DP is about to be Spelled Out. At this point, the DP will behave like a phase.

4. Given a strictly cyclic phase-based derivational model, (6) makes accurate predictions for the (non)islandhood of subjects in Chomsky’s (ibid.) data, and beyond. (A) In (3b), both the wb-phrase (=WH) and the containing DP bear a [uF], hence both can be moved by IME to [Edge,vP] (see [6] for the phasehood of vP). The order of the two IMEs cannot be restricted by Closeness, as no feature-checking is involved. Thus, the WH is allowed to subextract to [Edge,vP] first, cf. (7). (B) In (3a), moving the WH by IME out of the DP located in [Spec,vP] is not licensed by Last Resort, as the DP is not yet fully checked, and is not yet to be Spelled Out. The DP undergoes Spell Out as soon as it has moved to [Spec,TP] and has been fully checked. The IME of WH to [Edge,DP] is now licensed by Last Resort, however, such a movement would be counter-cyclic. WH is trapped inside DP. (C) Since in (i) the DP is not fully checked in lower [Spec,TP], the IME of WH to [Edge,DP] is not licensed by Last Resort there. However, when matrix vP is reached, subextracting WH from DP by IME to matrix [Edge,vP] is allowed. The (remnant) DP then raises by IME to the same [Edge,vP]; see (8). From here DP moves to matrix [Spec,TP], and WH to matrix [Spec,CP]. (D) We also capture the fact that a contrast between external and internal arguments extends to subextraction from wb-phrases as well, as I demonstrate (see (9) vs. (10)). (E) The (cross-linguistic) observation that vP-internal subjects are not islands (see (11)) also falls into place. DP-* is not fully checked before T is Merge in and enters Agree with DP_. As Spell Out applies only at the phase level, the subject-in-situ will be Spelled Out at the level of the first phase PH above TP. IME of the WH contained in the subject DP to the Edge of this first phase PH is possible, as no phase boundary intervenes (As for ex situ DP_, Spell Out applies to DP in Spec,TP upon Merger with TP (when TP ‘projects’), i.e., at the level of the DP-phase.) (F) Time permitting, this latter result is extended briefly to Spanish, where subextraction is allowed from postverbal subjects, but not from preverbal subjects [3], and to Italian, where the reverse situation holds.
(1) If two phrase markers are built independently of each other (or, in parallel), then they are opaque domains with respect to extraction from one into another.

(2) All subjects that are moved to Spec,TP must be opaque to subextraction.

(3) a. ?*[CP [Of which car] i did [TP [DP the driver [—],] j T [vP [DP — [—],] j cause a scandal]]]?
   b. [CP [Of which car], was [TP [DP the driver [—],] j T [vP awarded [DP — [—],] j a prize]]]?

(4) Of which car is the driver likely to cause a scandal?

(5) a. T inherits its uninterpretable features ([uF]s) from C.
   b. Movements to C and T take place in parallel (they are simultaneous, or freely ordered).

(6) IME is licensed by Last Resort at a given derivational stage S iff at S
   (a) the derivation can continue only by applying Spell Out (Transfer) immediately, and
   (b) without moving α out of the Spell-Out Domain of the current phase to the Edge, the derivation would result in uninterpretability upon immediate Spell Out (‘crash’).

(7) [vP [DP the driver [—],] j [vP [of which car] [vP V [DP the driver [of which car] […]]]]] = (3b)

(8) [vP [DP the driver [—],] j [vP [of which car] [vP V [DP — [—],] j [T to] [vP [DP — [—],] cause…]]]]?

(9) ?*[Who] do you wonder [how many portraits of] caused a scandal?

(10) [Who] do you wonder [how many portraits of] were really painted by Rembrandt?

(11) [Which candidate were [TP there [vP [DP posters of] all over the town]]]? (Lasnik & Park 2003)

Selected references
WHOLESALE LATE MERGER
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The Puzzle: A’-movement does not bleed Condition C if a relevant name is within a complement of a moved phrase, as in (1)a. This fact can be taken as evidence for the copy theory, as illustrated in (1)b-c. However, a fact from A-movement points to the opposite conclusion. A-movement does bleed Condition C in the same environment, as in (2)a. This fact is a challenge to the copy theory, as is clear from (2)b-c. On the basis of (1)a and (2)a, the properties of A’- and A-movement can be characterized by (3), which is problematic to the theory of movement because there is no principled reason why the two types of movement should work in these different ways.

The Proposal: We argue that the facts that motivate (3) can actually be explained under the copy theory. Counter-cyclic merger (CCM) constitutes a central component of our analysis. Following Fox (2002), we argue that CCM is always permitted as long as the output structure is interpretable. Under this approach, together with an independently motivated procedure to interpret copies, Fox’s (2002) Trace Conversion (4), CCM is applicable to restrictors of determiners (WholeSale Late Merger, WLM) as well as to adjuncts, which Lebeaux (1988) has claimed can be merged counter-cyclically (see Bhatt and Pancheva 2004 for related proposal). We propose the derivation in (5) for (2)a. In (5)a, only the determiner is base-generated, and it moves alone. The restrictor, which contains the name, is WLM-ed with every after it moves out of the c-command domain of the pronoun, as in (5)b. Trace Conversion converts the lower copies of every into syntactic objects that receive the same interpretation as that assigned to traces. As can be seen in (5), our approach explains the grammaticality of (2)a within the copy theory.

We claim that WLM is prohibited in the derivation for (1)a as a consequence of the Case assignment mechanism. It has been argued that Case assigning heads assign Case to constituents in their c-command domain by entering into an agreement relation with them (Chomsky 2000). Since NPs need Case and an object gets Case from v, the restrictor NP must be introduced within the complement of the verb, as in (6). Thus, Condition C is violated in (1)a. (As discussed in Fox (2002), the CCM of complements of NPs ends up yielding an uninterpretable structure, as in (7). Thus, there is no derivation for (1)a in which Condition C is not violated.) In (5), we argue that the restrictor is merged with the determiner in the matrix VP-adjoined position, as in (8) (see Sauerland 2003 for relevant data). This position is above the pronoun, but below the Case assigning head, T.

Further Evidence I: Our analysis predicts that WLM is applicable even in A’-movement contexts if a restrictor is a constituent that does not need to receive Case. We argue that this prediction is borne out, based on the observation that if a restrictor is a CP, which is widely assumed not to need Case, a violation of Condition C is circumvented in A’-movement. To set the stage, let us discuss a so-called raising structure for relative clauses (RCs), which is illustrated in (9)b. In a raising structure, the restrictor is a CP (see Hulsey and Sauerland 2006 and Sauerland 1998 for supporting arguments). With this background, let us consider (10). (10)a is ruled out by a Condition C violation, on a par with (1)a. A Condition C violation is circumvented in (10)b even though the name is within a complement of a moved element, just like in (10)a. We argue that WLM is applicable in (10)b because the RC is attached to the restrictor and the entire restrictor can be analyzed as a CP, as shown in (11).

Further Evidence II: Topicalization of free relatives bleeds Condition C, as in (12)a-b. To the best of our knowledge, this fact has not been discussed in the literature. Note that topicalization of a non-free relative DP does not bleed Condition C, as in (12)c. The fact that a constituent that immediately follows a wh-phrase in a free relative is an obligatory element, as shown in (13), suggests that John is within a complement of the topicalized phrase in all of the cases in (12). The contrast in (12) follows from our approach, together with an analysis of free relatives along lines of Caponigro (2002), in which free relatives are DPs headed by a covert determiner, which takes a CP as its restrictor. As shown in (14)b, we assume that the determiner is a definite determiner (see Jacobson 1995 for related idea). Given this, (12)a-b are explained in the same way as (10)b, as illustrated in (15)-(16).

Conclusion: Given the WLM approach, we can draw the generalization in (17) about circumstances in which movement can leave a contentless copy. We have seen that if a restrictor is a CP, a contentless copy can be found in a wider range of positions than those described in (17), which is expected under the proposed approach.
Data:

(1) a. ??/*Which argument that John is a genius did he believe? (Fox 1999:164)
   b. **copy theory: [[which argument that John is a genius] did [he, believe [which argu. that John is a genius]]]
   c. **trace theory: [[which argument that John is a genius], did [he, believe t1]]

(2) a. Every argument that John is a genius seems to him, to be flawless. (Fox 1999:192)
   b. **copy theory: [[every argument that John is a genius] seems to himi to be [[every argument that John is a genius] flawless]]
   c. **trace theory: [[every argument that John is a genius], seems to himi to be t1 flawless]

(3) a. A'-movement must leave a copy.
   b. A-movement can leave a trace.

(4) Trace Conversion
   a. Variable Insertion: (Det) (Pred) → (Det) (Pred) λy(y=x))
   b. Determiner Replacement: (Det) (Pred) λ(y=x) → the (Pred) λ(y=x)) (adapted from Fox 2002:67)

(5) a. θ
   b. TP

(6) θ

(7) *TP [which argument that John is a genius]] λx. did [TP he believe [the [argument λy. [y=x]]]]

(8) [TP T [VP [every argument that John is a genius]] [VP seems to himi to be [[every] flawless]]]

(9) a. the picture of himself that Johni likes
   b. raising structure: [DE the [CP [picture of himself], that [TP Johni likes t1]]]

(10) a. *Which argument of Johni’s did he omit in the final version?
    b. Which argument of Johni’s that Mary had criticized did he omit in the final version?

(11) a. [TP he, omit [which] in the final version] → movement of which, WLM, & Trace Conversion
    (We assume that determiners, such as which, can discharge the Case assigning property of heads.)
    b. [CP [which [CP argument of Johni’s that Mary had criticized]] λx. did [TP he, omit [the x] in the final version]]
    (We assume that this RC can be analyzed as a raising structure.)

(12) a. [Whichever picture Johni likes], I want himi to take home.
    b. [Whichever picture of Johni’s mother Mary likes best], I want himi to take home.
    c. *[The argument that Johni’s theory is correct], I want himi to present.

(13) I will buy whichever books *(you read).

(14) a. whichever picture John likes
    b. [DE THE [CP [whichver picture]], [TP John likes t1]]]

(15) a. I want himi, to take home [THE] → movement of THE, WLM, & Trace Conversion
    b. [THE [whichever picture John, likes]], λx. [I want himi, to take home [the x]]

(16) a. I want him, to take home [THE] → movement of THE, WLM, & Trace Conversion
    b. [THE [whichever picture of Johni’s mother Mary likes best]], λx. [I want himi, to take home [the x]]

(17) In a movement chain of a DP whose restrictor is an NP, <α1 … αn>, where α1 is the tail and αn is the highest position within the c-command domain of its Case assigning head, the chain members <α1 … αn> can be interpreted as syntactic objects that receive the same interpretation as that assigned to traces.

Selected References
The Proper Binding Condition Effect as a Consequence of Cyclic Linearization
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Synopsis: Based on the radical reconstruction property of scrambling, Saito (1989) proposes that the Proper Binding Condition (PBC, Fiengo 1977) should be an S-structure condition, to explain the ungrammaticality of (1), where the fronted CP contains an unbound trace of scrambling. Subsequent works have attempted to reduce the condition to a property of LF or narrow syntax (Kitahara 1997, Saito 2003). This paper discusses two major issues concerning this condition. First, we ask why a condition like the PBC exists in grammar. The second issue has to do with a longstanding puzzle, which we call the A′-puzzle: Traces of A′-movement do not induce the PBC-effect (Huang 1993, Lasnik 1999), as opposed to traces of A′-movement. As shown in (2), the unbound traces contained in the fronted phrases are created by A′-movement of the subjects, and the sentences are well-formed. The situation becomes more puzzling given that even traces of scrambling which may qualify as A′-movement (Mahajan 1990, Saito 1992, Nemoto 1993) induce the PBC-effect. It is shown that these two questions are answered straightforwardly by proposing that the PBC-effect is a property of linearization in the PF component. More specifically, it is claimed that the PBC-effect is a consequence of Linearization Preservation in (3), which is proposed to follow from the mechanism of Cyclic Linearization by Fox and Pesetsky (2005). Moreover, it is argued that the proposed analysis can overcome one serious problem concerning the interaction of scrambling and passivization, which the previous analyses suffer from, and also that the proposal has an implication for the analysis of the double object construction (DOC).

Analysis: The proposal accounts for the ungrammaticality of (1), which has a derivation like (4), in the following way: Given that CP and VP constitute Spell-out Domains (Fox and Pesetsky 2005), the order PP→C′ is obtained at the step (4a), where the embedded CP completes. At the later step (4b), where the matrix CP completes, the order C′→PP is established. Given Linearization Preservation (3), the derivation (4) is straightforwardly ruled out because these two orders contradict each other: PP cannot precede and follow C′. On the other hand, the same mechanism can explain the grammaticality of (2): What is crucial is that unbound traces contained in the fronted phrase are outside of VP. At the completion of VP in the step (5a), only the V′→Obj order is established. The relative order of subjects and the elements within VP, namely V and the object, are established at the step (5b). Because the order V′→Obj can be preserved at this point, no ordering contradiction arises. Hence, the derivation in (5) causes no problem. Thus, the linearization approach to the PBC-effect solve the A′-puzzle.

Comparison with Prior Analyses: Kitahara (1997) attempts to reduce the PBC to the Minimal Link Condition (MLC). Under the MLC-analysis, (1) is ruled out by the following reason: Although both PP and CP undergoes the same operation, which is driven by some feature on the higher head, the operation is first applied to the more deeply embedded element, namely PP, skipping over the closer candidate, namely CP. The MLC-analysis attributes the grammaticality of (2) to the difference of the driving forces of movement: Case and wh-movement/VP-fronting. Although the MLC-analysis can naturally answer the question of why the PBC exists and the A′-puzzle, Saito (2003) points out that the MLC-analysis fails to account for (6), where the passivized control infinitival CP contains the trace of the scrambled PP. Noting that scrambling from the control infinitival has A′-property, (as in (7), where the scrambled anaphor does not induce the Condition C-effect,) Saito (2003) points out that the MLC analysis wrongly rules in (6) since passivization involves A′-movement and scrambling of PP involves A′-movement. With that, Saito (2003) reformulates the PBC as a condition on Merge, as in (8). Saito’s (2003) approach, however, cannot answer the former question straightforwardly. Moreover, the fact that scrambling out of the control infinitival CP can also be A′-movement as in (9) poses a question to Saito’s (2003) analysis, which assumes A′-movement does not leave a trace. If the relevant scrambling can be counted as A′-movement, it becomes unclear why this trace does induce the PBC-effect. The proposed analysis, however, can account for (6) in the same manner as (4). Since every constituent within the embedded CP has to precede C′ koto at the completion of the relevant CP, as in the step (10a), the order C′ ed→PP established at the step (10b) induces contradiction. Note that since the A′-status of the scrambling trace contained within the infinitival CP is irrelevant, the proposed analysis can overcome the problem, without recourse to the condition (8).

Consequence: Yatsushiro (1999) observes that in the DOC, VP-preposing can leave the indirect object (IO), as in (11a), but cannot the direct object (DO), as in (11b). Given the traditional view of the DOC where both IO and DO are base-generated within the same VP (Larson 1988), as in (12a), the proposed analysis predicts that both of the orders IO→V′ and DO→V′ are established at the completion of VP. Thus, in addition to (11b), which has the contradicting V′→DO order, (11a) is also ruled out because of the contradicting V′→IO order. Hence, it is wrongly predicted that there is no contrast in (11). On the other hand, under the view where IO and DO are in the separate projections (Marantz 1993, Ura 1996, Pykkänen 2002; Hoshi 1994, Saito and Hoshi 2000), as in (12b), the order established at the completion of VP is only DO→V′, so that VP-movement in a later step can establish the order where V′ precedes IO without contradiction, as in (12c). Hence, (11a) is ruled in. Meanwhile, (11b) is ruled out because of the contradicting V′→DO order. Hence, the contrast in (11) can be correctly explained. Therefore, the proposed analysis supports the latter view of the DOC.
(1) *[[CP Hanako-ga しゅう to じに] [PP Sooru-ni], [Tarao-ga しゅう to omotteiru]] (koto)
   -NOM be that Seoul-in -NOM think fact
   “That Hanako lives しゅう, in Seoul, [Tarao thinks しゅう]” (Saito 2003: 498, slightly modified)

(2) a. [How likely しゅう to [VP win the race]], is John しゅう (Saito 2003: 502)
   b. [しゅう [VP criticize himself]], John said Bill しゅう never will しゅう. (Huang 1993: 112, slightly modified)

(3) Linearization Preservation (Fox and Pesetsky 2003: 2)
The linear ordering of syntactic units is affected by Merge and Move within a Spell-out Domain, but fixed once and for all for each of each Spell-out Domain.

(4) a. [[CPemb [Semb [PP Sooru-ni] Vemb] [しゅう to]]
   Linear Order at the completion of the embedded CP: Semb >> PP >> Vemb >> Cemb
   b. *[[CPmatrix [CPemb [Semb t1 Vemb] [しゅう to]] [PP Sooru-ni] [S t2 V]]]
   Linear Order at the completion of the matrix CP: Semb >> Vemb >> Cemb >> PP >> S >> V ¬Contradiction

(5) a. [[VP V0 Obj]]
   Linear Order at the completion of VP: V0 >> Obj
   b. [[CP [AdvP [Sobj [VP V0 Obj]] C t1 [T [AdvP v]]]]
   Linear Order at the end of the derivation: V0 >> Obj >> -S >> T0 ¬No contradiction

(6) *[[CP PRO しゅう ikuku koto]-ga [PP Sooru-made], Tarao-ni しゅう meizirareta]
   go C -NOM Seoul-to -to ordered-was
   “[To go しゅう] to Seoul, was ordered Tarao しゅう” (Saito 2003: 501, slightly modified)

(7) Hanako-ga otakai-o [Tarao-to Ziroo]-nī [CP PRO t1 hihansuru koto]-o meizita
c -NOM each other’s ACC -and -to criticize -ACC -ordered
   “Hanako, each other’s ordered [Tarao and Ziroo] to criticize t1.” (Adapted from Saito 2003: 502)

(8) Condition on Merge (Saito 2003: 507-508)
a. α is subject to Merge only if α is a complete constituent.
b. α is a complete constituent =df (i) α is a term, and (ii) if a position within α is a member of a chain γ, then every position of γ is contained within α.

(9) John-to Bob-o [[otakai-o totitoya]-ga [PRO] t1 rikaisuru koto]-o kokoromita
   and ACC each other’s father-NOM understand N -ACC attempted
   “John and Bob, each other’s father attempted to understand t1.” (Adapted from Nemoto 1993)

(10)a. [[CPemb PRO [PP Sooru-made] Vemb [しゅう to koto]]]
   Linear Order at the completion of the embedded CP: PP >> Vemb >> Cemb
   b. *[[CPmatrix [CPemb [PRO t1 Vemb] [しゅう to koto]] [PP Sooru-made] [Subj t2 Vmatrix]]
   Linear Order at the completion of the matrix CP: Vemb >> Vmatrix >> PP >> S >> Vmatrix ¬Contradiction

(11)a. [[VP Erika-o syookaisa-sae [Kai-ga Uli-ni t1 sita]]: DO >> V0 >> S >> IO
   -ACC introduce-even -NOM -to did
   “[Even introduce Erika], Kai did t1 to Uli.”
b. *[[VP Uli-ni syookaisa-sae [Kai-ga Erika-o t1 sita]]: IO >> V0 >> S >> DO
   -to introduce-even -NOM -ACC did
   “[Even introduce to Uli], Kai did Erika t1.” (Adapted from Yatsuhashi 1999: 181)

(12)a. [VP Subj [v [VP IO [v DO V0]]] v]}
   Linear Order at the completion of VP: IO >> DO >> V0 ¬Contradiction with both (11a) and (11b)
   b. [VP Subj [v [VP IO [v DO V0]] F] v]
   Linear Order at the completion of VP: DO >> V0 ¬Contradiction only with (11b)
   c. [[CP [VP IO V0]... [VP Subj [v [VP IO [v DO V0]] F]]]]
   Linear Order at the completion of CP: DO >> V0 >> S >> IO ¬No Contradiction with (11a)

Selected References
The Variable Nature of Implosives in Consonant-Tone Interaction
Katrina Schack Tang, UCLA

The most common type of consonant-tone interaction demonstrates an affinity between low tone and voiced obstruents. This is cross-linguistically consistent, both synchronically and diachronically. However, despite the fact that implosives are voiced obstruents, they do not follow this pattern. I will present data from three Chadic languages demonstrating that implosives can share an affinity with either low or high tone, and that they can also remain neutral in a language where consonants interact with both low and high tone. I argue that this variability results from constraints that exclude combinations of specific tones with some part of the feature specification of implosives, [+voice, +constricted glottis].

Implosives are most often neutral with regard to consonant-tone interaction (Bradshaw 1999). An example of such a language is Bade (Schuh 2002), where H tone spreading is blocked by voiced obstruents and L tone spreading by voiceless obstruents, but implosives and sonorants fail to interact with tone (see 1). In the verbal system of Zina Kotoko (Odden, to appear), on the other hand, implosives are neutral with respect to rules lowering H to M but group with voiced consonants in lowering M to L (see 2). Finally, in Ngizim (Schuh 2002), as in Bade, voiced obstruents block H spreading and voiceless obstruents L spreading, with sonorants neutral for both processes, but here implosives group with the voiceless obstruents to block L spreading (see 3).

This variability cannot be directly explained by the phonetics, since available data show that implosives, both in Zina Kotoko and in other languages for which measurements have been made, do not have the same lowering effect on F0 that non-implosive voiced obstruents have (see Odden for summary). However, the constraints governing their behavior are grounded in the phonetics. In Zina Kotoko, as Odden argues, implosives lower tone because they are [+voice]. Consequently, they form a natural class with voiced obstruents, and the voicing is associated with lowered F0. This paper diverges from his by accounting for the lowering with a constraint rather than through feature spreading; the constraint used is *H/ [+voice], which incurs one violation for each occurrence of the feature [+voice] in the span of a H tone. Here, the ranking *H/ [+voice] >> Faith(Tone) must obtain. In Ngizim, implosives show the opposite behavior; here the feature [+cg] plays the determining role. Glottal tension naturally raises F0, and this is reflected in a phonological constraint *L/ [+cg], preventing [+cg] from occurring in the domain of a L tone. Under the ranking *L/ [+cg] >> Align, implosives are able to block L tone spreading. In Bade, then, the inertness of implosives can be explained by the ranking *H/ [+voice, -cg], *L/ [-voice] >> Align >> *H/ [+voice], *L/ [+cg]. Here, the high ranking of *H/ [+voice, -cg], which is violated by a non-implosive voiced obstruent in a high tone span, causes voiced obstruents but not implosives to block high tone spreading, and the low ranking of *L/ [+cg] permits low tone to spread through implosives as well.

Finally, I compare this constraint driven approach to the unified tone-voice theory advocated by both Odden and Bradshaw and argue that, in order to explain the variable behavior of implosives with regard to tone, it is necessary that tone features and laryngeal features be kept distinct from one another. Under a unified feature approach to Ngizim, where implosives pattern with voiceless obstruents, Bradshaw argues that sonorants are underspecified for [voice] at the point in the derivation where L tone spreading is triggered occurs but that they are specified for [voice] at a later point where H tone spreading is blocked. I show that this type of underspecification, impossible in an OT approach, is unnecessary if the features are distinct.
Data

(1) Bade

a. High tone spreading through implosives, sonorants, voiceless obstruents

/n̥ə́tankú/ > n̥ə́tə́nkú ‘I pressed’
/n̥ə́d̪uwaɭu̞/ > n̥ə́d̪uwaɭú ‘I got tired’

b. High tone spreading blocked by a voiced obstruent

/nə́bə́zə́rtu̞/ > nə́bə́zə́rtu̞ ‘I shamed’

c. Low tone spreading through implosives, sonorants, voiced obstruents

/dʒə̀ɗə̀koɾə́ro/ > dʒə̀ɗə̀koɾə́ro ‘we followed a donkey’
/dʒə̀kə̀rə́koɾə́ro/ > dʒə̀kə̀rə́koɾə́ro ‘we stole a donkey’
/dʒə̀tə́də̀koɾə́ro/ > dʒə̀tə́də̀koɾə́ro ‘we released a donkey’

d. Low tone spreading blocked by a voiceless obstruent

/dʒə̀gaɗə́koɾə́ro/ > dʒə̀gaɗə́koɾə́ro ‘we caught a donkey’

(2) Zina Kotoko

a. Typical recent past verb tone pattern is MH (unmarked vowels have M tone)

/skə́lə́m/ ‘pay back’
/tamə́m/ ‘touch’

b. Voiced consonants, including implosives, lower M to L

/gə́lmə́m/ ‘twist’
/də́hə́m/ ‘write’

(3) Ngizim

a. High tone spreading through implosives, sonorants, voiceless obstruents

(V+DO, pronouns omitted for clarity)

/bə̀kə́lə́wai/ > bə̀kə́lə́wai ‘roasted meat’
/mə́sə́kə́ɾə́m/ > mə́sə́kə́ɾə́m ‘bought a hoe’
/nə̀ʧə́də́əfə́bə́/ > nə̀ʧə́də́əfə́bə́ ‘don’t like heat’

b. High tone spreading blocked by a voiced obstruent

/mə́sə́ɡə́skə́m/ > mə́sə́ɡə́skə́m ‘bought a rooster’

Low tone spreading through voiced obstruents, sonorants

/də̀və́bə́/ > də̀və́bə́ ‘not a road’
/bə́mə́bə́/ > bə́mə́bə́ ‘not gambling’

c. Low tone spreading through voiced obstruents, sonorants

/də̀və́bə́/ > də̀və́bə́ ‘not a road’
/bə́mə́bə́/ > bə́mə́bə́ ‘not gambling’

d. Low tone spreading blocked by implosives and voiceless obstruents

/cə́tə́bə́/ > cə́tə́bə́ ‘not pepper’
/aə́də́bə́/ > aə́də́bə́ ‘not a knife’

References


Obligatory movement and sluicing in a wh-in situ language
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The elliptical construction SLUICING, illustrated in (1), is commonly analyzed as deletion of the TP in a constituent question (Merchant (2001) following earlier work by Ross (1969)). Since English obligatorily fronts interrogative phrases to Spec-CP, sluicing always leaves behind a wh-phrase REMNANT, e.g. what in (1). In a wh-in situ language, such as the hypothetical English′ in (2), Merchant’s account predicts that sluicing will delete the entire constituent question—including the wh-phrase that does not raise out of TP. In Farsi, a real wh-in situ language, this prediction is not borne out, however; it has a sluicing construction, illustrated in (3), that is identical on the surface to its English counterpart in (1). I argue the wh-remnant in Farsi sluicing arrives at its position outside of the elided TP by movement, as in English, and that this movement is motivated by an EPP-laden uninterpretable wh feature that is bundled with the feature that triggers deletion of TP. This is a universal property of sluicing that we see only in Farsi because it is otherwise wh-in situ.

First, I set aside a nonmovement analysis of sluicing in Farsi. Sluicing-like constructions in other wh-in situ languages, such as Japanese (Merchant 2001:115–127), Mandarin Chinese (Adams 2004), and Korean (Nishiyama et al. 1996), have been successfully analyzed as cleft questions in which the expletive subject, copula, and cleft clause (the part that looks like a relative clause) are all null. Farsi, too, has a productive clefting strategy in which the expletive is null and the cleft clause is optionally present (4). The only difference between a cleft like (4) and the sluice in (3) is the presence of the copula bud. Several facts militate against assimilating sluicing in Farsi to the cleft structure in (4). Besides the fact that Farsi does not have a general process of copula deletion, a variety of phrases that are not allowed in the pivot of a cleft are fine as remnants in a sluice: viz. i) adjuncts (5), ii) DPs bearing the object maker rā (6), and iii) PPs (7).

Evidence that the remnant in Farsi sluicing arrives at its position by movement comes from the fact that it obeys the normal constraints on movement (except island constraints; see Merchant 2001:159–229). Primarily, Farsi does not allow preposition stranding when PPs are scrambled (data not shown). In sluicing, too, stranding the preposition of a PP remnant is ungrammatical (8). The interrogative phrase in sluicing raises, I propose, to the specifier of a focus projection (Spec-FP) located above TP but below CP, as shown in (9). This predicts correctly that, when the complementizer ke is realized overtly, it occurs to the left of the remnant (9). The remnant in sluicing also exhibits the interpretive effects associated with Spec-FP. An interrogative phrase in that position bears a pitch accent (indicated with capitalization), which, without going into too much detail here, means that it stands in a contrastive relationship with another phrase of the same type. In (10), the interrogative phrase che ketābi ‘what book’ bears a pitch accent and contrasts with ye ketāb ‘a book’ regardless of whether TP is pronounced or not.

I adopt Merchant’s (2001) ellipsis feature E as the trigger for PF deletion in sluicing. In English, E appears on the complementizer that occurs in constituent questions, C_{[Q,uwh^*]}, and triggers deletion of its sister, TP. Simply putting an E feature on the F head in Farsi predicts—falsely—that the sluice in (11), which is parallel to the hypothetical English′ example in (2), will be grammatical. Nothing forces the wh-remnant to raise to Spec-FP before TP is deleted. I propose that the E feature itself comes bundled with [uwh*], an uninterpretable wh feature that must be checked locally by a wh-phrase. In the derivation of a grammatical sluice like (3), the wh-remnant raises to Spec-FP in order to check this feature, as illustrated schematically in (12a). The derivation of the ungrammatical sluice in (11) crashes, however, since [E, uwh*] on F is not checked locally (12b). In English, we do not see that E comes bundled with [uwh*] since the head that licenses sluicing, C_{[Q,uwh^*]}, bears the same feature itself. The head that licenses sluicing in Farsi, in contrast, bears no such feature. Looking at a wh-in situ language like Farsi is thus more informative than only looking at English, since it enables us to see the independent requirement for a wh-remnant imposed by the ellipsis feature E.
(1) Rudy bought something. Guess \[ CP \text{ [TP Rudy bought (what)]]}. English

(2) Rudy bought something. Guess \[ CP \text{ [TP Rudy bought what]}. English

(3) rāmin ye chiz-i xarid. hads bezan chi. Ramin one thing-IND bought.2SG guess hit.2SG what
‘Ramin bought something. Guess what.’ Farsi

(4) hads bezan pro ch bud (ke rāmin xarid).
guess hit.2SG what was that Ramin bought.3SG
‘Guess what it was (that Ramin bought).’

(5) navid javāh-rā dozdide. ne-midunam chetor/cherā/kei/kojā (*bud).
Navid jewels-OBJ stole.3SG NEG-know.1SG how/why/when/where was
‘Navid stole the jewels. I don’t know how/why/when/where.’

(6) mahin one from book-PL-OBJ bought.3SG but to Sohrab NEG-say.3SG which-OBJ was
‘Mahin bought one of the books but she won’t tell Sohrab which.’

(7) giti bā kesi dāhsht sohbat mikard vali na-goft bā ki (*bud).
Giti with someone had.3SG speaking did.3SG but NEG-said.3SG with who was
‘Giti was talking with someone but she didn’t say who.’

(8) giti bā kesi dāhsht sohbat mikard vali na-goft *(bā) ki.
Giti with someone had speaking did.3SG but NEG-said.3SG with who
‘Giti was talking with someone but she didn’t say who.’

(9) mahin mixād ye chiz-i bexare vali yād-esh ne-miyād \[ CP (ke) [FP CHI]
Mahin want.3SG one thing-IND buy.3SG but memory-her NEG-come.3SG that what
\[ TP mahin mixād (chī bexare)].
Mahin want.3SG buy.3SG
‘Mahin wants to buy something but she doesn’t remember what.’

(10) man midunam ke sohrāb ye ketāb xaride va rāmin midune \[ CP [FP CHE ketāb-i]
I know.1SG that Sohrab one book bought.3SG and Ramin know.3SG what book-IND
\[ (TP sohrāb (che ketābi) xaride)].
Sohrab bought.3SG
‘I know that Sohrab bought a book and Ramin knows what book.’

(11) * rāmin ye chiz-i xaride. hads bezan \[ CP [TP rāmin chi xaride]].
Ramin one thing-IND bought.3SG guess hit.2SG Ramin what bought.3SG
Intended: ‘Ramin bought something. Guess what.’

(12) a. (3) \[ \approx \]

b. (11) \[ \approx *

On the syntax of DP but coordination  
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Introduction — The literature contains contradictory claims regarding the syntax of DP but coordination (1a). Sag et al 1985 and Merchant 2004 claim that, as opposed to and, but can only conjoin full clauses: cases of DP but coordination are reanalysed as clausal coordination plus ellipsis (we adopt here Merchant’s analysis of ellipsis as movement to the left periphery plus PF deletion of IP (1b)). On the other hand, Barwise & Cooper 1981 assume that genuine DP but coordination is possible (1c), the difference with and being purely semantic. This paper argues that (i) both options are available in natural language; (ii) they can be distinguished through a battery of tests; and (iii) the choice depends on whether it is the polarity of the conjuncts that is contrasted.

Clausal coordination plus ellipsis — And and but differ in various aspects that suggest an elliptical analysis for the latter. First, and allows a negation in the first conjunct to scope over the second (2a), whereas but does not (2b). This follows from an elliptical analysis through simple lack of c-command (2c). Second, but induces locality effects (3b) that are absent with and (3a), which suggests that the second conjunct in (3b) has a full clausal structure (3c). Third, in languages like Spanish, and-coordinated postverbal subjects trigger full agreement (4a), whereas but-coordinated postverbal subjects trigger first conjunct agreement (4b). This contrast can be explained if the second conjunct in (4b) belongs to a separate clause and therefore cannot trigger agreement on the first conjunct verb (4c). Fourth, preverbal but-coordinated subjects are ungrammatical regardless of the type of agreement (5b), as they involve coordination of unlike categories (DP and CP).

DP coordination without ellipsis — However, there are cases of but coordination that appear to falsify these generalisations. First, both (6a) and (6b) have the same reading, in which ten students scopes over both conjuncts. This reading requires coordination at the DP level, since positing clausal coordination plus ellipsis would incorrectly predict a reading where the ten students who read Mamet aren’t the same ten who read Auster. Second, (7b) shows that, in the same way as and, but can be embedded inside an island without inducing a locality violation. Finally, some but-coordinated subjects can also trigger full agreement (8b) and sit in preverbal position (9b), showing that they involve genuine DP coordination in the same way as and-coordinated subjects.

Distribution — Importantly, this variation is not random —rather, it is determined by contrastivity (cf. Unbach 2003 for arguments that but necessarily involves contrast). More specifically, clausal coordination plus ellipsis is observed whenever but contrasts the polarity of the two conjuncts, and DP coordination elsewhere. The but examples in (2) through (5) involve a negative first conjunct and an affirmative second conjunct (in Spanish and German, this context requires a different word for but, namely sino and sondern, respectively). Clausal coordination plus ellipsis is also required in cases of but coordination with an affirmative first conjunct and a negative second conjunct (see Morgan 1973 and Vicente 2006 for evidence). On the other hand, in (6) through (9) it is not polarity that is contrasted, but only the coordinated DPs.

Implementation — The analysis builds on the hypothesis that there is a very tight connection between syntax and semantics (contra, e.g., Culicover & Jackendoff 2005). Let us assume that polarity is encoded in a CP-level functional projection, PolP (cf. Laka 1990, Cinque 1999). Therefore, polarity contrast requires both conjuncts to be large enough to contain an independent PolP —i.e., both must be full clauses. However, whenever polarity is not at stake, and contrastivity targets only DPs, it is enough for both conjuncts to be only DPs. This captures the distribution above.

Conclusion — This analysis belongs to the family of proposals that analyse DP coordination as conjunction reduction (cf. Schein 1997 for insightful discussion). However, this talk shows that conjunction reduction cannot generalised to all cases of DP coordination: rather, conjunction reduction is observed only in those cases where a large structure is independently needed. Elsewhere, genuine DP coordination obtains.
Examples

(1)  
   a. Steve ate one apple but three bananas
   b. [CP Steve ate one apple] but [CP [ three bananas]i [IP Steve ate ti]]
   c. Steve ate [[DP one apple] but [DP three bananas]]

(2)  
   a. Joost didn’t drink scotch and wine [¬(p∧q)]
   b. Joost didn’t drink scotch but wine [(¬p)∧q]
   c. [CP Joost didn’t drink scotch] but [CP [ wine]i [IP Joost drank ti]]

(3)  
   a. ✓ I haven’t met the man [that drank five martinis and three white russians]
   b. ?* I haven’t met the man [that drank three martinis but three white russians]
   c. [CP I haven’t met the man that drank five martinis] but [CP [ three white russians]i [IP I have met the man that drank ti]]

(4)  
   a. No * llegó / ✓ llegaron un violinista y tres trombonistas
      not arrived.3SG arrived.3PL a violinist and three trombone players
   b. No ✓ llegó / * llegaron un violinista sino tres trombonistas
      not arrived.3SG arrived.3PL a violinist but three trombone players
   c. [CP No llegó un violinista] sino [CP [ tres trombonistas]i [IP llegaron ti]]
      not arrived.3SG a violinist but three tr. players arrived.3PL

(5)  
   a. ✓ [ [DP Un violinista] y [DP tres trombonistas]] no llegaron
      a violinist and three trombone players not arrived.3PL
   b. * [ [DP Un violinista] sino [DP tres trombonistas]] no llegaron / llegó
      a violinist but three trombone players not arrived.3PL arrived.3SG

(6)  
   a. Ten students read five plays by Mamet and only one novel by Auster
   b. Ten students read five plays by Mamet but only one novel by Auster

(7)  
   a. ✓ I met the man [that drank five martinis and (only) three white russians]
   b. ✓ I met the man [that drank five martinis but (only) three white russians]

(8)  
   a. * Llegó / ✓ llegaron un violinista y tres trombonistas
      arrived.3SG arrived.3PL a violinist and three trombone players
   b. * Llegó / ✓ llegaron un violinista pero tres trombonistas
      arrived.3SG arrived.3PL a violinist but three trombone players

(9)  
   a. ✓ [ [DP Un violinista] y [DP tres trombonistas]] llegaron
      a violinist and three trombone players arrived.3PL
   b. ✓ [ [DP Un violinista] pero [DP tres trombonistas]] llegaron
      a violinist but three trombone players arrived.3PL

References

This paper presents evidence that contrastive topics (CTs) must occur ‘outside’—i.e. syntactically higher than—at least one focus. This is unexpected for Büring (1997, 2003), who observe restrictions on the distribution of CTs, but whose theory predicts a free distribution of CT and focus relative to each other (see 1). So why do contrastive topics have to occur ‘outside’ of foci?

Proposal. Contrastive topics are argued to involve a recursive nesting of covert focus operators, similar to cases of nested overt operators like (2), and the focus with wider scope is a CT. I implement the idea using the operator $G_R$ proposed in Wagner (2005) (3), essentially a strengthened version of the $\sim$-operator in Rooth (1992). The presuppositions introduced by nesting $G_R$ in the same way as ‘even’ and ‘only’ in (2) leads to the presuppositions in (4), which is sufficient to account for the typical usages of contrastive topics (cf. Büring, 1997).

Scope Predictions. The analysis makes the prediction that the syntactic distribution of contrastive topics should track the syntactic distribution of nested focus operators. In English, a focus operator can take wide scope over a preceding focus operator, as is evidenced by the truth conditions of (5). This can be analyzed as LF-movement. The correct prediction is that contrastive topics in English can either precede or follow foci in surface structure (6) (cf. Jackendoff, 1972, a.o.). In German, however, the scope between focus operators in similar examples is fixed (7), and concomitantly a contrastive topic cannot follow a focus (8).

Possible Objections. A number of obvious potential objections need to be addressed for this analysis to be convincing: i. Aren’t contrastive topics different from nested foci? Earlier Arguments against an analysis of contrastive topics as nested foci (a.o., Büring, 1997) compared the case of contrastive topics to multiple foci bound by the same operator, while the correct parallel is that to multiple foci bound by separate operators. ii. Can contrastive topics really not be embedded under foci? Some of the contexts used in earlier work actually do not force one accented constituent or the other to be the contrastive topic and allow the roles to be switched rather freely. Using negative quantifiers, which are hard to construe as CTs, it can be shown that topics indeed must be outside of foci. iv. Aren’t there pragmatic implications of CTs that are absent with nested foci? Additional pragmatic implications of CTs remain unaccounted. However, these can be attributed to independent operators that sometimes but not always accompany CTs. The English fall-rise contour, or the German the ‘hat-contour’ (cf. discussion in Jacobs, 1997) can be analyzed as operators taking alternative sets of assertions as their argument, and implicating that there is some other alternative assertion that is possibly true (adapting ideas from Ward and Hirschberg, 1985; Constant, 2006), or that there is an alternative assertion that is taken to be true (a weaker version of the implication in Ludwig, 2006) respectively. The claim is that they are no more necessary ingredients of CTs in the narrow sense (invoking alternative sets of sets of propositions) than the presuppositions that only and even introduce are necessary ingredients of focus (invoking alternative sets of propositions, following Büring (1997)).

Comparison. The analysis incorporates insights from Büring (1997) an Büring (2003), but decomposes the meaning contribution of contrastive topics further. It differs from Sauerland (2005) in how this decomposition works, in predictions with respect to the presupposition encoded, and in the predictions about the syntactic distribution. The proposal shares with Neeleman and van de Koot (2007) that it syntactically restricts the distribution of CTs, but differs in the expected pattern, e.g. Neeleman and van de Koot (2007) predict that CTs can be base-generated below the focus.
**Notation:** All accented words are in capitals and bear a high pitch accent if not marked as either:

- fall: \; rise: /; fall–rise: \/

1. **CT-value Formation** (Büring, 2003, 519)
   a. Step 1: replace focus with wh-word and front the latter; if focus marks the finite verb or negation, front the finite verb instead.
   b. Step 2: form a set of questions from the result of step 1 by replacing the contrastive topic with some alternative to it.

2. Even JOHN climbed only a SMALL hill.

3. **Relative Givenness**
   
   \[
   \begin{align*}
   [G_R] &= \lambda x. \lambda y. \exists y' \in Alt(y), y' \neq y, s.t. [y'x] \text{ is given}: [yx]
   \end{align*}
   \]

4. What did you buy on 59th Street?
   On /fiftyNINTH street, I bought SHOES
   a. Presupposition 1 (‘Focus’ Presupposition): There is an alternative x’ to ‘shoe’ such that ‘I bought x’ is salient.
   b. Presupposition 2 (‘Topic’ Presupposition): There is an alternative y’ to ‘on 59nd street’ such that ‘I bought x at y’ is salient.

5. Except for Bill, the kids in this summer camp have no respect for animals and the potential dangers, which makes them take too many risks, including with poisonous snakes.
   a. Even the MOST poisonous snake frightens only BILL.
   b. Only BILL is afraid of even the MOST poisonous snake.

6. What did you buy on 59th street?
   a. CT First: On /fiftyNINTH street, I bought SHOES.
   b. CT Last: I bought SHOES on /fiftyNINTH street.

7. (Same context as 5; this particular example is incompatible with German ‘auch nur’, a relevant control since some authors argued that English ‘even’ is ambiguous and can mean both the equivalent of German ‘sogar’ and ‘auch nur’)
   a. Sogar die am WENIGSTEN giftige Schlange ängstigt nur BILL.
   b. # Nur den Bill ängstigt sogar die GIFTIGSTE Schlange.
   only the bill frightens even the most poisonous snake

8. What did you buy on 59th street?
   a. CT First: Auf der /NEUNundfünfzigsten Straße habe ich SCHUHE gekauft
   b. CT Last: Odd under any rendition that accents ‘NEUNundfünfzigste Straße’:
      # Ich habe SCHUHE auf der NEUNundfünfzigsten Straße gekauft.
      I have shoes on the 59th street bought

9. Do you think Mary was involved in the candy store robbery?
   She likes /CHOCOLATE.
Goal. Languages sometimes break their normal phonological restrictions in the interest of having an affixed word resemble its base, which means that Optimality-Theoretic learners require a bias of OO-Faith » IO-Faith in order to converge on restrictive final grammars (McCarthy 1998, Hayes 2004). In this paper I show that: (a) mutation processes, which cause non-resemblance to the morphological base, can give rise to similar restrictiveness issues; and (b) these considerations furnish a reason to prefer a floating-feature approach to mutation (Lieber 1987 et seq.) over one based on constraints that directly demand alternations, e.g. antifaithfulness (hereafter AF, Alderete 1999).

Problem. Javanese supplies an example of a mutation process which produces structures which are not otherwise licit in the language. As shown in (1), in this language the elative form of an adjective is formed by making the last vowel in the stem tense and high. The tensing process can create tense vowels in closed syllables, even though Javanese otherwise bans such vowels. Alternations (Dudas 1976) and L2 transferences (Adiasmito-Smith 2004) show that this ban is synchronically active in Javanese, so a Javanese learner must converge on a ranking ‘MUTATE’ » *TENSE/CLOSED » FAITH(tense): underlying tense vowels are normally laxed if they would fall in a closed syllable, but such vowels can be created in elative words in order to satisfy the constraint ‘MUTATE’ which demands that the mutation process take place. To converge on this ranking, when confronted with elative words like [alus] which violate *TENSE/CLOSED, the learner must choose ‘MUTATE’ rather than FAITH(tense) as the constraint to install above *TENSE/CLOSED; choosing FAITH(tense) instead would produce a superset grammar that allowed tense vowels in closed syllables. Learners thus require a bias ‘MUTATE’ » IO-F.

Proposal. In a floating-feature theory of mutation, the underlying form of the elative affix in Javanese would contain a floating feature [+tense]. When the learner has succeeded in segmenting elative words into stem + (floating feature) suffix, they will confront mark-data pairs like the one shown in (2). Adult productions of elative words like [alus] violate *TENSE/CLOSED, and there are two faithfulness constraints that the learner could install above that markedness constraint in order to allow [alus] to win: either MAX[+tense] (preserve all underlying tokens of [+tense]) or MAXFLT[+tense] (preserve underlingly floating tokens of [+tense]; see Zoll 1996, Wolf 2007); the latter constraint would be our ‘MUTATE’. Since MAXFLT[+tense] is applicable in a proper subset of the contexts that MAX[+tense] is, the learner will choose MAXFLT[+tense] if there is a bias of Specific-F » General-F, which is motivated on independent grounds (Smith 2000, Hayes 2004, Prince & Tesar 2004, Tessier 2007).

Comparisons and conclusions. Floating-feature theories of mutation are challenged by proposals that mutation is triggered by constraints which directly demand that there be alternations between members of a paradigm, e.g. AF. If the ‘MUTATE’ » IO-F bias required for Javanese takes the form of AF » IO-F, an incorrect prediction about intermediate stages of child language is made. As in (3), this bias will cause learners to analyze alternations as resulting from a mutation process whenever they can, leading to unattested intermediate stages where learners apply spurious mutations in affixed forms. Comparable predictions arise for REALIZE-MORPHHEME theory (Kurisu 2001). Learnability considerations thus give us two reasons to prefer a representational theory of mutation: the ‘MUTATE’-high bias can be reduced to an independently needed Specific-F » General-F bias, and undesirable predictions about learners’ intermediate stages are avoided.
Javanese adjectives (Data from Dudas 1976)

Plain

<table>
<thead>
<tr>
<th>Stem</th>
<th>Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td>alus</td>
<td>‘refined’</td>
</tr>
<tr>
<td>aŋil</td>
<td>‘difficult’</td>
</tr>
<tr>
<td>abut</td>
<td>‘heavy’</td>
</tr>
<tr>
<td>rindiʔ</td>
<td>‘slow’</td>
</tr>
</tbody>
</table>

Elative

<table>
<thead>
<tr>
<th>Stem</th>
<th>Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td>alus</td>
<td>‘most refined’</td>
</tr>
<tr>
<td>aŋil</td>
<td>‘most difficult’</td>
</tr>
<tr>
<td>abut</td>
<td>‘most heavy’</td>
</tr>
<tr>
<td>rindiʔ</td>
<td>‘most slow’</td>
</tr>
</tbody>
</table>

(2) Mark-data pair for ‘most refined’ after parsing into stem + suffix

<table>
<thead>
<tr>
<th>Input</th>
<th>winner ~ loser</th>
<th>*TENSE/CLOSED</th>
<th>MAX[+tense]</th>
<th>MAXFLT[+tense]</th>
</tr>
</thead>
<tbody>
<tr>
<td>/alus [+ATR]/</td>
<td>[alus] ~ [alus]</td>
<td>L</td>
<td>W</td>
<td>W</td>
</tr>
</tbody>
</table>

(3) Problematic scenario for Anti-Faithfulness » IO-Faith bias

a. Initial voiced obstruents fortite, leading to alternations; voicing otherwise tolerated

/dap/ → [tap]SG, /ke-dap/ → [ke.dap]PI
/tade/ → [ta.de]SG, /ke-tade/ → [ke.ta.de]PI

b. Mark-data pair for alternating plural form (OO constraints evaluated w.r.t. base /tap/)

<table>
<thead>
<tr>
<th>Input</th>
<th>winner ~ loser</th>
<th>OO-F(voi)</th>
<th>−OO-F(voi)</th>
<th>*VOICE</th>
<th>IO-F(voi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ke-dap/</td>
<td>[ke.dap] ~ [ke.tap]</td>
<td>L</td>
<td>W</td>
<td>L</td>
<td>W</td>
</tr>
</tbody>
</table>

c. One W-assigning constraint must go on top for observed [ke.dap] to beat *[ke.tap]; Anti-Faithfulness » IO-Faithfulness bias prompts learner to pick −OO-F(voi) rather than IO-F(voi)

d. That yields the following ranking—putting the learner in an intermediate stage with a spurious voicing mutation in plurals (OO constraints evaluated w.r.t. base /tak/)

<table>
<thead>
<tr>
<th>/ke-tak/</th>
<th>−OO-F(voi)</th>
<th>OO-F(voi)</th>
<th>*VOICE</th>
<th>IO-F(voi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>→ a. [ke.dak]</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>b. [ke.tak]</td>
<td>W1</td>
<td>L</td>
<td>L</td>
<td>L</td>
</tr>
</tbody>
</table>

Selected references


ABSTRACTS OF POSTERS
The Data. The value of an indefinite expression can co-vary with or depend on the value of a universal in its surface scope as shown by the pair-list of (1) and the bound reading of local in (2). Such a dependent reading (DR), however, mysteriously disappears if the indefinite antecedes a pronoun as shown in (3) and (4). The phenomenon is quite general including regular cases of inverse scope as shown in (5)-(6). However, letting an indefinite antecede a pronoun is incompatible with the dependent reading only if the non-dependent universal quantifier has to cross over the (trace of the) indefinite, as in (3)-(4). When no crossover is involved, an indefinite can indeed both antecede a pronoun and co-vary with the value of a universal, as in (7)-(8). This is a new type of WCO effects that I call Team WCO (TWCO), because the chains of the two operators work together to yield the attested effect. Examples (1)-(2), on the one hand, show that there is nothing wrong with the universal crossing over the (trace of the) indefinite to yield the DR if the indefinite does not bind a pronoun. On the other hand, (7)-(8) show that an indefinite anteceding a pronoun can have a dependent interpretation with respect to the universal, if the latter has not crossed over it. What (3)-(4) show, then, is that the lethal combination for the dependent interpretation is one that involves crossing and anteceding a pronoun; the crossing, however, is done by the universal whereas the pronoun is contributed by the binding chain of the indefinite.

Puzzle and Proposal. There are two ways of representing the covariance of an indefinite with respect to a universal: through scope subornation (SS) and via Skolem functions. The previous data are particularly puzzling if covariance is represented by SS: (3)-(4) should be ambiguous like (1)-(2) if that were the case. I argue that the puzzle can be explained if covariance between an indefinite and a universal is only represented via Skolem functions in natural language. In so doing, I provide an analysis of the TWCO facts that relies crucially on the functional interpretation of the indefinite, as follows (read below). I introduce the notion of MD (memory domain) defined in (9), for chains. I argue that WCO effects, including TWCO, are the result of the constraint informally formulated in (10). Standard cases of WCO, as in (11)-(12), are handled by the proposal as follows. The problem of (11) is that in assigning the value of the wh to an overt variable (the pronoun) and then assigning the same value to a null variable (the trace) we are changing the vehicle used to express the given value (cf. Safir's (1984) PCOB). Such changes are penalized by (10) if they occur within the MD of the chain of the operator. Given (9), and given that the trace of the wh is immediately contained by the VP, which lacks and edge, the MD for the wh-chain in (11) ends up being the entire clause (i.e., the distance between Spec, CP and the lower edge of the vP (i.e. the second bracket in (11))). Since the vehicle expressing the value of the wh has clearly changed within that distance, (11) constitutes a violation of (10). The MD of the wh-chain in (12), on the other hand, is the distance between the operator (i.e. Spec, CP) and its trace, since the domain immediately dominating the trace is the vP, which has an edge (Spec, vP), which in turn coincides with the position of the trace. Given this, it is clear that binding incurs in no violation of vehicle change in the MD of the operator in that case. TWCO can be treated similarly, if indefinites are analyzed in terms of Skolemized choice-functions (Kratzer 1998) and the DR arises when the universal binds the individual parameter of the function. In examples like (1)-(2) with the LF in (13), the universal will bind the parameter of the function and its own trace, both null, and semantic reconstruction of the indefinite will not trigger a
vehicle change either (the indefinite does not bind overt variables). Examples like (3)-(4), on the other hand, are bad on the intended interpretation because the value that the crossing universal assigns to the null parameter of the function will be associated with the overt pronoun via semantic reconstruction of the indefinite (see (14)).

(1) Which cook put each sandwich on the platter?
   Bill, the BLT; John, the Ham and Cheese; ... (pair-list OK)
(2) A local hero introduced each candidate on the final day of campaign.
   (A hero from Mass. introduced Kerry; one from Texas, Bush; ... (DR OK)
(3) Which cook \(1\) put each sandwich on his\(1\) platter? (pair-list impossible)
(4) A local hero \(1\) introduced each candidate on his\(1\) birthday (DR impossible, here local cannot refer to the region of each candidate, but rather to that of the speaker).
(5) Someone visited every candidate (inverse scope possible)
(6) Someone\(1\) visited every candidate on her\(1\) birthday (Inverse scope impossible)
(7) [which cook\(1\)] did [each witness\(2\)] say \(t_1\) put the sandwiches on his\(1\) platter?
   (pair-list OK, the witnesses need not have said the same thing)
(8) [A different woman] seems to each witness to have married Brad Pit on her birthday. (DR ok, the woman can be different from witness to witness)
(9) \(MD_{df} = \) the distance between the head of a chain \(C\) and the first edge of the domain \(D\) containing the tail of the chain, if \(D\) has an edge, otherwise \(MD_{df} = \) the distance between the head of \(C\) and the lower edge of the first domain \(D'\) containing \(D\).  
   (For the purpose of this paper an Edge is to be understood as the specs or Escape-Hatch positions of Chomsky's phases)
(10) The value first assigned by an operator, cannot change vehicle within the MD of that operator.
(11) [Who\(1\) does [his\(1\) mother\(2\) [vp \(t_2\) love [VP \(t_1\)]]]]
(12) [Who\(1\) [vp \(t_1\)loves[VP his\(1\) mother \]]]
(13) [Each sandwich\(2\) [fx\(2\)(cook)\(1\)] \(t_1\) put \(t_2\) on the platter.]
   (Semantic reconstruction of the indefinite will pair the null variable \(x_2\) with the null trace. No violation of vehicle change)
(14) [Each sandwich\(2\) [fx\(2\)(cook)\(1\)] \(t_1\) put \(t_2\) on [his\(1\) platter.]
   (Semantic reconstruction of the indefinite associates the value assigned to the null variable \(x_2\) with the overt variable his\(1\). This is a violation of vehicle change)

References.
**The Data**: It is a popular hypothesis that the interpretation of sentences with *wh*-quantifier interactions is subject to a nesting crossing asymmetry. In particular, the hypothesis holds that quantified interrogatives are ambiguous if the chains of the interacting operators are in a nesting configuration, as in (1a), and unambiguous if the QP has to cross over the trace of the *wh* to have (at least) a part of the chain in its domain, as in (1c); a potential LF for (1b). Call this hypothesis May's conjecture (MC), named after May's (1985) pioneering analysis of the phenomenon. Although virtually every theory of wh-quantifier interaction assumes the correctness of MC, the data in (2)-(4) show that the hypothesis is equivocal: the b-examples in each of these cases have the same structure as (1b) and are therefore incorrectly predicted by MC to be unambiguous.

**Analysis**: To capture the interpretive differences between the pair of examples in (1), and those in (2)-(4), I will adopt Aguero-Bautista's (2000, 2001) proposal that the ambiguity of a *wh*-quantifier construction depends on the ability of the *wh*-phrase to reconstruct (have a copy interpreted) below the quantifier. I will also argue that his proposal that reconstruction is constrained by the condition in (5), which prevents a presuppositional phrase from being reconstructed into a θ-position, is correct. Under the minimalist assumption that object *every* only raises to the closest position where it can be interpreted, i.e., the edge of the v*P*, it follows that only non-presuppositional *wh*-phrases will be able to take scope under the quantifier in the b-sentences in (2)-(4). The condition in (5), however, has a stipulative character and needs to be derived from some more basic principle. A clear difference between v*P* and CP phases is that the content of the latter, namely force, is context dependent, whereas the content of the former, namely bare argument structure is not: we need context to determine whether (6) is a request for information or a concealed statement in the form of a rhetorical question, but who gets the role of beater and the victim of the beating is independent of context. A plausible interpretation for this difference is that for the cognitive system that deals with the context dependence property of linguistic items v*P* phases are informationally encapsulated, whereas CP phases are not. Along the lines of Fintel (1994) and others, I will assume that a presuppositional quantifier is one with a "contextually supplied set which is intersected with the common noun argument" of the determiner. The technical implementation of this idea requires merging and empty noun as and adjunct to the restriction of the determiner. Since this operation belongs in the cognitive system handling context dependence, and since argument structure is encapsulated or invisible to such a system, given the asymmetry just mentioned, it follows that presuppositionality is incompatible with reconstruction to a θ-position. Reconstruction to non-thematic intermediate position is allowed. (5) is therefore derived from information encapsulation, a general property of modular systems, hence a third-factor (language independent) principle.

**Extensions**: I will show that the current analysis can be extended naturally to account for some paradoxical cases of A-reconstruction discussed by Lasnik (2003), if we assume that establishing a subject-predicate relation with a positive indicative predicate somehow triggers a process of domain restriction of the subject of the relation (a natural assumption given that subjects are topics). Such contextually restricted subjects will be able to reconstruct below a raising predicate, but not all the way to the θ-position. This may very well be behind the inability of the raised quantifiers to reconstruct below and embedded negation as in (7).

**Implications**: The current analysis implies that the language faculty is internally modular. This is not surprising for cognitive systems that are themselves modular. In vision, for instance, there seems to be separate modules differently specialized for seeing motion and for seeing shapes. For any module postulated as a specialized mechanism of the language faculty we should look for patterns of spare and impairment comparable to those found in vision under brain damage.
(1)  
  a. Which book$_i$ did every student$_j$ read$_i$ yesterday?  
  b. Which man read every book yesterday?  
  c. [Which man$_i$ every book$_j$ read$_i$ yesterday]  

(2)  
  a. How many presidents did every bodyguards escort?  
  b. How many bodyguards escorted every president?  

(3)  
  a. What did every celebrity bring to New York?  
  b. What brought every celebrity to New York?  

(4)  
  a. Who did every guest$_i$ take to his$_i$ room?  
  b. Who took every guest$_i$ to his$_i$ room?  

(5)  
  Do not reconstruct a presuppositional XP into a $\theta$-position.  

(6)  
  Does he beat his wife?  

(7)  
  a. (it seems that) everyone isn't there yet  
  b. everyone seems [t not to be there yet]  

Selected References.  
Identity statements involving the adjective same often allow for both “token-identity” and “type-identity” readings: an examples like (1) can assert that John’s car is strictly identical to Bill’s car (token-identity), or that John’s car is merely of the same make, model and (perhaps) year as Bill’s car (type-identity). Previous research has taken this difference to reflect either variation in the way that model-theoretic individuals correspond to real-world individuals (Nunberg 1984), or else variation in the relation that is required to hold between John’s car and Bill’s car by same (Heim 1985, Lasersohn 2000). I propose instead that both the token- and type-identity readings of (1) require the relation of strict identity to hold amongst John’s and Bill’s cars. What distinguishes the readings is the nature of these individuals: type-identity readings require that strict identity hold amongst types qua abstract individuals. The resulting analysis accounts for certain intriguing facts regarding type-identity readings, while leading to a sharper understanding of the domain of individuals and its structure.

Although the aforementioned works focus upon its relevance to identity statements, the token/type distinction is a more widespread phenomenon. Example (2) is not an identity statement, yet it also allows for a type reading in addition to a token reading: (2) can assert that the bookshop has >10,000 book copies (tokens) in stock, or that it has >10,000 book titles (types) in stock. Krifka et. al. (1995: 77) and Geurts (1996) both suggest that under their type readings, examples like (2) involve reference to (or quantification over) abstract individuals, and they analogize these abstract individuals to those commonly assumed to underlie reference to (or quantification over) natural kinds, as in (3) (see, e.g., Carlson 1977, Krifka 1995, Chierchia 1998). In support of these authors’ suggestions, we can observe the following parallels between reference to types and references to kinds. First, just as there are predicates that apply to kinds but not their instances (cf. (4)), so too are there predicates that apply to types but not their tokens (cf. (5)). The predicates in (4) and (5) are closely similar in their underlying semantics: generally, they are concerned with the spatiotemporal distribution of the instances/tokens of a kind/type. Certain predicates, such as rare, apply equally well to kinds and types (cf. (6)). Second, both kind and type terms give rise to existential readings in the presence of episodic predicates (cf. (7)) and generic readings in the presence of characterizing predicates (cf. (8)). Finally, both kind terms and type terms exhibit what Carlson (1977) dubbed “differentiated scope”: the examples in (9) have readings under which everywhere “scopes over” the kind and type terms that kind of bird and that car, in that their instances/tokens may vary across locations. Kind and type terms thus pattern apart from other NPs, which obligatorily take wider scope than everywhere (cf. (10) under the instance/token readings). These facts show that reference to types displays the characteristic properties of reference to kinds, and justify the view that abstract individuals corresponding to types exist alongside abstract individuals corresponding to kinds. Types are then related to their tokens as kinds are to their instances: in each case, the latter “realize” the former.

Given the presence of types qua abstract individuals, a very simple account of the token- and type-identity readings for (1) becomes possible. In both cases, strict identity (‘=’) is required to hold amongst John’s and Bill’s cars; the difference lies in whether these are construed as concrete car-tokens or abstract car-types (cf. (11)). Of course, even under its type-identity reading, (1) requires the existence of car-tokens belonging to John and Bill. This entailment follows from the same repair mechanism that permits kind (and type) terms to occur in episodic contexts as in (7); specifically, I extend Chierchia’s (1998) ‘Derived Kind Predication’ (DKP) rule for such cases (cf. (12), (13)). Nunberg (1984) observes that type-identity readings are not always available: (14) cannot mean that one Ford Falcon crashed into another one. Our approach to type-identity suggests an explanation, namely that DKP cannot apply to resolve the type/episodic mismatch in (14). Though the reasons for this failure remain obscure, the infelicity of (15) suggests that the account is on the right track. Nunberg also notes the possibility of “mixed” readings: (16) apparently asserts that the book-token that Otto has been carrying is identical to the book-type that he voted to ban. Under our approach, (16) can be analyzed as a case of type identity in which DKP applies in the matrix clause, but not in the as-clause, which determines a type-level individual. (cf. (17)).
EXAMPLES

(1) John drives the same car as Bill does.
(2) That bookshop has more than 10,000 books in stock.
(3) The local supermarket has more than 30 kinds of fruit for sale.
(4) a. This kind of animal is common throughout Asia.
   b. That kind of bird is now extinct.
   c. A Finnish engineer invented this kind of turbine in 1922.
(5) a. This book was distributed widely.
   b. That Sony television has been discontinued.
   c. The engineers at Chevrolet designed that car in the 1950s.
(6) a. That kind of animal is rare.
   b. This book is rare.
(7) a. I saw that kind of monkey at the zoo yesterday.
   b. (Pointing at a copy of Lolita on a friend’s bookshelf) I just checked that book out from the library.
(8) a. That kind of animal suckles its young.
   b. That car gets good gas mileage.
(9) a. I saw that kind of monkey at the zoo yesterday.
   b. This book was distributed widely.
   c. A Finnish engineer invented this kind of turbine in 1922.
(10) a. A bird is found everywhere. / Some birds are found everywhere.
    b. That kind of bird is found everywhere.
(11) a.  A bird is found everywhere. / Some birds are found everywhere.   
    b. That kind of animal is rare.
(12) Derived Kind/Type Predication

REFERENCES

I argue based on a set of novel data that RNR is sensitive to the prosodic constituent structure of a sentence – in particular, the shared material (the target) must form an independent intonational phrase (I-phrase). More specifically, I argue that for RNR to be possible, the target must be able to stand as a separate I-phrase either (A) as a result of regular prosodic parsing or (B) as a result of modification of the regular prosodic structure via contrastive stress assignment. I show that in other cases, i.e., in the cases where the target cannot stand as a separate I-phrase at all, RNR is disallowed.

A straightforward illustration of point (A) above comes from the contrast between (1) and (2). Regarding (1), as is well-known, pronoun it in English behaves like a clitic, which means that it cannot stand as a separate I-phrase. Therefore, the ungrammaticality of (1) is predicted under the assumption that the target must be a separate I-phrase. In (2), given that the target is a full clause, it can naturally form a separate I-phrase via regular prosodic parsing.

Point (B) can be illustrated by the contrast between (3) and (4). With normal intonation, (3) is bad, as indicated. Here, the target, i.e., the string father is sick, cannot form an independent I-phrase via regular prosodic parsing. (Note that prenominal genitives are normally parsed into the same prosodic constituent with their head noun. Note in addition that the target here does not even form a syntactic constituent.) Therefore, the ungrammaticality of (3) is captured correctly.

It is crucial that (3) improves considerably when the last element of each conjunct receives contrastive stress, as in (4). Note that contrastive stress is standardly assumed to insert an I-phrase boundary after the element that receives it, which is typically signaled by a pause (Selkirk 1984, Radanović-Kocić 1988, Swingle 1993, Truckenbrodt 1995, Ladd 1996, Bošković 2001, among many others). The effect of contrastive stress on prosodic parsing can be clearly seen from the behavior of Serbo-Croatian (SC) second position clitics, which have to occupy the second position within their I-phrase (Radanović-Kocić 1988, Bošković 2001). Consider (5), where the clitic će is not in the second position of the I-phrase that corresponds to the whole clause. However, if Petru receives contrastive stress, the sentence becomes perfect, as in (6). Bošković (2001) argues that this is so because contrastive stress on Petru results in insertion of an I-phrase boundary after it. The clitic će in (6) is then correctly placed in the second position of its I-phrase. Given this, the improvement in (4) receives the same analysis as (6). That is, contrastive stress on the capitalized elements in (4) allows insertion of an I-phrase boundary after them. Given that a string at the prosodic level P is exhaustively parsed into a sequence of Ps (Selkirk 1984, Nespor and Vogel 1986), what follows MARY’S/SUSAN’S in (4) must be an I-phrase as well. The important point is that even when the target cannot form a separate I-phrase via regular prosodic parsing, it can still be a legitimate target of RNR if the element that precedes it receives contrastive stress, which allows insertion of an I-phrase boundary.

There is further evidence for the current proposal. Consider (8)-(10). Crucially, in none of these sentences does the contrastively stressed element immediately precede the target. Therefore, contrastive stress assignment cannot play a role in determining the target of RNR here. As argued above, in such contexts, what is required is that the target be an independent I-phrase via regular prosodic parsing. The contrast here bears out this prediction. That is, only the sentence in (10), in which the target cannot form a separate I-phrase via regular prosodic parsing, results in ungrammaticality. (In (8) and (9), the target is a CP, which can be parsed as a separate I-phrase.) Compare also (10) with (4). The important point is that neither contrastive stress assignment, nor regular prosodic parsing allow the target in (10) to be parsed as an independent I-phrase, which I argue leads to the ill-formedness of the sentence.

To summarize, I have argued that RNR is sensitive to the prosodic constituent structure – in particular, the I-phrase structure – of a sentence. The crucial illustration of this proposal came from the cases where illegitimate RNR sentences become grammatical when their prosodic structure is adjusted by contrastive stress assignment. Moreover, sentences in (4) and (11) show that the target of RNR does not have form a syntactic constituent. The fact that RNR is sensitive to prosodic constituency and insensitive to syntactic constituency, for which I provide additional evidence based on novel data like (11), provides strong evidence for the kind of PF deletion analysis of RNR pursued by Swingle (1993), Hartmann (2000), and An (2007), among others.
(1) * Alice composed, and John performed, it.  (Abbott 1976)

(2) John believes, and Mary suspects, that Einstein is from Mars.

(3) * I think Mary’s, but he thinks Susan’s, father is sick.

(4) I think MARY’S, but he thinks SUSAN’S, father is sick.  (Capitals indicate contrastive stress.)

(5) * Petru on eve prodati knjige.
   Petar.dat he will sell book.acc
   ‘To Petar, he will sell books.’  (Bošković 2001:65)

(6) PETRU on eve prodati knjige.  →  [ip PETRU] # [ip on eve prodati knjige]
   Petar.dat he will sell book.acc
   (ip stands for intonational phrase and # a pause.)

(7) [ip I think MARY’S] # [ip and he thinks SUSAN’S] # [ip father is sick]

(8) John CLAIMED yesterday, and Peter DIDN’T claim yesterday, that Mary left.

(9) John NEVER believed, and Peter ALWAYS believed, that Mary left.

(10) * John NEVER believed Mary’s, but Peter ALWAYS believed Mary’s, father is sick.

(11) Tomo-nun Ana-ka ppang-ul, kuliko Nina-nun Ana-ka bap-ul,   (Korean)
   T-top A-nom bread-acc and N-top A-nom rice-acc
   mekess-tako kun sori-lo malhayssta.
   ate-comp big.voice-with said
   ‘Tomo (said loudly that) Ana (ate) bread and Nina said loudly that Ana ate rice.’

From the lexicon to a stochastic grammar
Michael Becker, University of Massachusetts, Amherst

**Introduction** Phonological processes that are restricted to certain lexical items typically apply stochastically to novel items. Furthermore, it has been recognized that stochastic grammars reflect statistical generalizations in the lexicon (e.g., Hayes & Londe 2006, Albright & Hayes 2003, Zuraw 2000, and others). Learning a stochastic OT grammar from the lexicon, however, is a problem that has been henceforth unsolved.

I offer a learning algorithm that learns from a list of lexical items, building lexical information into an OT constraint hierarchy. Upon encountering a novel item, the grammar applies stochastically and projects lexical trends onto the novel item. The algorithm is implemented as an open-source Java program. In this work, I demonstrate the workings of the algorithm with a case study of Hebrew plural morphology.

**The Hebrew case study** Hebrew marks the plural by suffixing –im to masculine nouns and –ot to feminine nouns. Some masculine nouns exceptionally select the feminine –ot, and a majority of those nouns have an [o] in their final syllable. This preference for –ot in masculine nouns that end in [o] applies productively to novel nouns, as seen in Berent, Pinker & Shimron (1999).

Simplifying greatly, a morphological constraint, AGREE(gender) requires the masculine –im on masculine nouns. The markedness LICENSE(mid) requires that mid vowels be either stressed or auto-segmentally linked to a stressed vowel (see 1 below, and cf. mid vowel licensing in Shona, Beckman 2004). Regular nouns that end in [o] require the ranking AGREE(gender) » LICENSE(mid), as in (2), and exceptional nouns that end in [o] require the opposite ranking (3).

**The algorithm** The algorithm relies on Biased Constraint Demotion (BCD, Prince & Tesar 1999), augmented by a mechanism of Inconsistency Resolution (Pater to appear). Once the Hebrew learner realizes that conflicting evidence causes BCD to stall (4), the learner creates two lexically-specific clones of LICENSE(mid): one clone specific to a lexical item that requires AGREE(gender) » LICENSE(mid), and another clone specific to a lexical item that requires the opposite ranking (5).

From this point on, when the learner hears a new plural form, they associate the new lexical item with one of the existing clones of LICENSE(mid), simply by trying both possible associations and seeing which one generates the observed form. As more words are learned, the number of nouns that take each suffix is built into the grammar.

Words that don’t have [o] in their final syllable will produce the same result with either association (6), and will therefore not be associated with either clone. Thus, only words that end in [o] will be listed by the clones of LICENSE(mid).

The resulting grammar is categorical, since all constraints are ranked just like in classical OT (Prince & Smolensky 1993). When a novel singular is encountered, however, clones compete for influence. The novel form is tried out with both clones of LICENSE(mid), and the likelihood of each clone to be selected is directly proportional to the number of lexical items that are already associated with it, creating a stochastic effect based on the categorical grammar.

**Competing accounts** Unlike the Gradual Learning Algorithm (GLA, Boersma 1997), my algorithm produces a grammar that is stochastic only relative to novel forms; the GLA does not distinguish listed words from novel words. Moreover, when learning from a lexicon, the GLA will wrongly promote general faithfulness constraints, as pointed out in Hayes & Londe (2006).

The USELISTED constraint of Zuraw (2000) distinguishes existing items from novel ones, but unlike my model, it doesn’t derive the patterning of novel items from the trend created by the listed items. Thus, my algorithm and its Java implementation are a step forward in accounting for lexicon-based stochastic phenomena within the OT framework.
(1) Singular  Plural

Regular  alón  alon-im  ‘oak tree’
               \[-hi][+hi]

Irregular  xalón  xalon-ót  ‘window’
               \[-hi]

(2) \(/alon_{MASC} + \{im_{MASC} , ot_{FEM}\}/  AGREE(gender)  LICENSE(mid)

\(\checkmark\) a. alon-im  

\(\checkmark\) b. alon-ót

(3) \(/xalon_{MASC} + \{im_{MASC} , ot_{FEM}\}/  LICENSE(mid)  AGREE(gender)

\(\checkmark\) a. xalon-im  

\(\checkmark\) b. xalon-ót

(4) xalon-ót \sim xalon-im  L  W

alon-im \sim alon-ót  W  L

(5) xalon-ót \sim xalon-im  W  L  LICENSE(mid)_{xalon}

alon-im \sim alon-ót  W  L  LICENSE(mid)_{alon}

(6) \(/axbar_{MASC} + \{im_{MASC} , ot_{FEM}\}/  LICENSE(mid)_{xalon, ..., axbar}  AGREE(gender)  LICENSE(mid)_{alon, ..., axbar}

\(\checkmark\) a. axbar-im  

\(\checkmark\) b. axbar-ót

Selected References


The consequences of being small: Imperatives in Spanish
María Biezma (University of Massachusetts at Amherst)

Spanish imperatives can take a variety of morphological forms. In (1a) imperatives show the morphological markings known as the imperative mood. As (1b) shows, those forms cannot co-occur with negation, and the subjunctive forms are called upon instead (as shown by (1c)). Bare forms are also possible, (2). I develop a theory of the structure of Spanish imperatives and use it as the basis for a straightforward compositional semantics. I investigate differences at the level of structure between (1)-(2), and make a proposal for their denotation. A full account of imperatives requires considering these results in the light of imperative force, which I take for granted here (what I have to say does not distinguish amongst the various proposals available).

The Size of imperatives: Many attempts to account for imperatives in Romance languages, in particular in Spanish, characterize these constructions as CPs ([5], [1]). These analysis assume the existence of an imperative operator, Imp, in C0. They use the articulated structure to explain the behavior of negation in Spanish: to obtain imperative mood marking, verbs must move to C0, but negation blocks movement. [1] claims that verbs reaching C0 are the only genuine imperatives, and imperative force is encoded in the syntax. Problems: To explain where force comes from in commands with infinitival, or subjunctive forms, [1] has to appeal to a pragmatic explanation. Moreover, CP theories wrongly predict that Spanish imperatives have tense and aspect. However, if we do not assume the existence of Imp in C0 there is no reason to believe that imperatives in Spanish are CPs. There is actually no reason to posit more structure than a νP.

Crosslinguistic Perspectives: For English, [4] argues against an analysis of imperatives in English as VPs on the basis of the possibility of having overt subjects and their relative position with respect to other elements. However, none of [4]’s arguments is valid for imperatives in Spanish, since they do not have overt subjects. For German, we can see that imperatives are bigger than νPs thanks to V2 (3). In (3) the verb is in V2 position. It precedes ethical datives, negation and discourse particles.

The Syntax in Spanish: In Spanish the verb never precedes discourse particles and does not allow adverbs above νP. [7] points out the lack of evidence for any tense or aspect morphology in imperatives in Romance languages. Working with a more articulated structure and given the position of the agent, I propose that imperatives in Spanish are just νPs. The structure for (1a) is in (4). Imp is simply ‘pure’ second person agreement, sg. or pl (missing with infinitival morphology). Imperative/infinitival morphology are licensed by a F(orce) head which prevents the structure from being embedded by other predicates (similar to participles and gerunds).

Semantics: An alternative property analysis: [8] proposes that imperatives are properties of the addressee, that are added to the addressee’s To-Do List. This proposal is not right for Spanish, where there are two kinds of pronouns associated with imperatives and treating both as addressee-bound logophors ([8]) would not capture the differences in their interpretation.

Proposal: νP denotes properties of events (we read this right off the syntax). Consequences:

a. The temporal location of imperatives can be explained with a covert (Davidson style) temporal adverb, (5).

b. The small structure explains the absence of negation: neg. cannot modify properties of events.

c. Negation can only appear when there is more structure, (6a), bringing in perfective aspect (6b), since negation takes scope over the existential quantifier in aspect, (6c).

d. Finally, given the reduced structure, imperatives are correctly not predicted to denote propositions true or false in the actual world.

Conclusion: A “small” analysis of Spanish imperatives allows us to read semantic properties right off the syntax. The morphology associated with imperatives can be understood as person agreement and no Imp operator is postulated in a CP layer. Morphological differences between negated and no negated imperatives can be derived from the semantic requirement to include aspect under negation.
(1)  a. ¡ Cierra / cerrad la puerta ahora!
   close.2.sg.Imp / close.2.pl.Imp the door now
   ‘Close the door now!’

   b. *¡ No cierra / No cerrad la puerta!
   neg close.2.sg.Imp / neg close.2.pl.Imp the door
   ‘Don’t close the door!’

   c. ¡ No cierres / No cerrad la puerta ahora!
   neg close.2.sg.Subj the door now / neg close.2.pl.Subj the door now
   ‘Don’t close the door!’

(2)  a. ¡ Cerrar la puerta! / a’¡ No cerrar la puerta!
   close.Inf the door / neg close.Inf the door
   ‘Close the door!’ / ‘Don’t close the door!’

(3)   Mach’ mir ja keine Dummheiten!
   make.2.sg.Imp me(Dat) JA.particle no silly things
   ‘Don’t do silly things!’

(4)   \[ F[vP[\nuP \pro\nu, Imp)vP]now] ]

(5)   a. \(\text{Tr(now)} = \lambda e.\text{now}(e)\)
   b. \(\text{Tr(close the door now)} = \lambda e.\text{Agent}(2sg)(e) \land (\text{close the door})(e) \land \text{now}(e)\)

(6)   a. \[ F[vP[\nuP \pro\nu, Imp)vP]now] ]
   b. \(\text{Tr(Perfective)} = \lambda p<e, t>.\lambda s.\exists e[e \leq s \land p(e)]\)
   c. \(\lambda s. \exists e[e \leq s \land p(e)]\)
   d. \(\text{Tr(now)} = \lambda s.\text{now}(s)\)

The two goals of this paper are: (i) to argue that, syntactically, the measure expression is the head of the extended projection in Romanian pseudo-partitive constructions like (1) – much like the leftmost noun is the head of true partitive constructions like (2) (in Romanian, the preposition de appears only with pseudo-partitives, while the preposition din/dintre appears only with true partitives); (ii) to propose a suitable semantics for pseudo-partitives that accommodates the syntactic generalization above. The main contribution is deriving the observation in [6] that measure expressions are monotonic in pseudo-partitive constructions from the fact that measure expressions have individual-based denotations in pseudo-partitives, which can be obtained only if measure expressions are used monotonically relative to the part-whole structures of their underlying domains of individuals. I use monotonic / non-monotonic in the sense of [6].

Syntactic and Semantic Properties of Romanian Pseudo-Partitives. The number and gender agreement properties of pseudo-partitives indicate that the measure expression is the head of the (main) extended projection of the pseudo-partitive: the pronominal clitic i (they.m.pl) and the definite article cei (the.m.pl) in (5) agree with the measure noun litri (liter.m.pl) and not with the noun apă (water.f.sg) (see [7] for more discussion of – and a different take on – the syntax of pseudo-partitives). In contrast, the measure phrase is not the head of constructions in which measure expressions are non-monotonic, like in (6), where the pronominal clitic o (it.f.sg) and the indefinite article o (a.f.sg) agree with apă.

Moreover, the topicalization structure in (5) indicates that pseudo-partitives can be used referentially and the entities they refer to are individuated by the measure expression (a count noun) and not by the other nominal expression (a mass noun). This is further supported by the fact that pseudo-partitives can be embedded in partitive structures like the one in (7), which allow only referential, definite NPs (see [2] for more discussion). Also, in (7), the indefinite cardinal doi (two) agrees in gender with the masculine noun litri (liters), not the feminine noun apă (water). Example (8) is only meant to show that, as expected in view of (4), such definite pseudo-partitives cannot be further embedded in pseudo-partitive constructions.

Deriving the Monotonicity Requirement: Pseudo-Partitives as Nominalizations. Following [6], I assume that nouns denoting sets of individuals always associate a part-whole structure with these sets: for mass nouns, this is the material-part lattice structure introduced in [3]; for count nouns, the structure is trivial: every individual is a part of itself and of no other individual.

The nominalization of a measure expression like liter, degree etc. (the basic denotations of which I take to be predicates of scalar intervals, following [6]) is the semantic operation by which these expressions are associated with predicates of individuals, obtained by restricting the domain of individuals and its associated part-whole structure contributed by the other nominal phrase in the pseudo-partitive to a sub-domain and a sub-structure that are materially equivalent (in the sense of [3]) to the original structure. Since liter, kilogram etc. are count nouns, the resulting sub-structure has a count part-whole structure, i.e. no two distinct elements in its domain have a common material part. Thus, the nominalization of a measure materially partitions its underlying domain and the individuals that form the partition cells have to also be individuals in the original part-whole structure: five kilograms of cheese are still cheese. Finally, each individual in the partition measures exactly one unit (one liter/kilogram etc.) according to the measure function involved in the original interval-based denotation of the measure expression.

Just as bottle of wine can be used to refer to both a measure and a portion of wine (in addition to referring to a container), kilogram, liter etc. can be used to refer to both measures/scalar intervals and individuals. This is an instance of polysemy, a better known and more extreme example of which is using the noun ham sandwich to refer to people: Every ham sandwich at that table is a woman ([5], example (24b); see also [4]).

To this, I only add a principle of individuation by measure constraining measure-based polysemy: the measure-based partition is arbitrarily chosen from a non-singleton set of possible partitions – where ‘arbitrarily’ intuitively means that any partition would ‘do equally well’. The non-singleton requirement rules out #three kilograms of pencil: only one partition respects the part-whole structure of the count noun pencil – the pencil part-whole structure itself (and it is unlikely that this is a suitable a partition: pencils do not weigh one kg). The arbitrariness requirement rules out #ten degrees of water: assuming that the temperature of the whole water is uniformly one degree, we can build multiple, non-equi-numerous partitions (one of them will have only one cell containing all the water, another will have two cells etc.) that will not ‘do equally well’.
(1) zece grame de brînză (de capră)
  ten grams of cheese (of goat)
  ten grams of goat cheese
(2) zece grame din această brînză (de capră)
  ten grams of this cheese (of goat)
  ten grams of this goat cheese
(3) #zece grame din brînză (de capră)
(4) #zece grame de această brînză (de capră)
(5) (Cei) trei litri de apă, Ion tocmai i = a băut / *a băut = o.
  (The.m.pl) three liter.m.pl of water.f.sg, John just they.m.pl = HAVE drunk / *HAVE drunk = it.f.sg
  John just drank (the) three liters of water (more precisely: (the) three liters of water, John just drank them).
(6) O apă de trei litri, Ion tocmai a băut = o / *i = a băut.
  A.f.sg water.f.sg of three liter.m.pl, John just HAVE drunk = it.f.sg / *they.m.pl = HAVE drunk
  John just drank a three liter water (more precisely: a three liter water, John just drank it).
(7) doi din cei cinci litri de apă
    two.m of the.m.pl five liter.m.pl of water.f.sg
(8) #doi de cei cinci litri de apă
    two of the five liter.m.pl of water.f.sg
    two of (every/the) five liters of water

Two other uses of measure expressions provide evidence that we independently need an operation that maps
interval-based denotations for measure expressions to individual-based denotations. First, individual-denoting
measure expressions can be used by themselves, not only in pseudo-partitives – see (9). Second, a measure
expression can provide the restrictor of a quantifier over individuals, as shown in (10) and (11) (naturally
occurring examples, courtesy of www.google.com). The corresponding bare and quantified Romanian
constructions are also felicitous. Such bare / quantified measure constructions seem to be possible only with
monotonic measure expressions.

(9) Mary bought two kilograms of cherries and John already ate one kilogram.
(10) The Allies massed 3091 guns, or one to every six yards of an eleven mile front.
(11) There was a policeman every two yards, on both sides of the road, from one end of the town to the other.

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Fragments with and without Articulated Constituents at LF  
Youngju Choi and James Yoon (University of Illinois at Urbana-Champaign)

1. Introduction: Debates on fragments (including Fragment Answers (FAs)) have clustered around two poles. Some argue that the unpronounced phrases are present syntactically in some form (Stanley 2000, Merchant 2004, Park 2005, Ahn and Cho 2006). Call this the Ellipsis Approach (EA). Others claim that the unpronounced phrases are missing altogether (Fernandez et al. 2004, Ebert et al. 2003, Culicover and Jackendoff 2005, Barton 1991, Barton and Progovac 2005, Yanofsky 1987). Call it the Direct Interpretation Approach (DIA). Morgan (1989), however, suggested that there may be two types of fragments: one which requires syntactic structure and the other which does not. Following his lead, we claim that case-marked and case-less fragments must be treated differently in languages like Korean and Japanese (K/J).

2. Problems with EA and DIA: Neither EA or DIA alone suffices to explain the behavior of the two types of fragments in K/J. The EA deals with case connectivity of case marked FAs ((1b, 1c, 2b, 2c)) by appeal to correspondence to the preceding sentential context (specifically, movement of the case-marked fragment followed by ellipsis—(3)). Caseless FAs ((4b)), on the other hand, are handled by assuming that movement may strand case markers ((4d)). The (PF) violation incurred by stranded case markers in turn is saved by deletion. However, the EA faces difficulty with patterns of complementizer deletion. A stranded complementizer does not seem to be saved even after PF deletion ((5c)) and requires deletion of the declarative marker along with it ((5b)). The EA also predicts that caseless FAs can appear multiply ((6e)), which is not the case ((6c)). On the other hand, the DIA has difficulties with case alternation of case marked FAs ((7)). Since the only source resolving the meaning of the missing parts is the preceding linguistic antecedent, if a form is mismatched with antecedent clause as in case alternation, DIA wrongly predicts that it would be ungrammatical. Further questions arise: if grammar generates nonsententials as X\textsuperscript{mix} (Barton 1991, Barton and Progovac 2005), what is the category of multiple FAs?

3. Proposal: We claim that in dependent-marking languages like Korean/Japanese, case markers turn NPs into functors which look for compatible predicates (Choi 2007, Choi and Yoon 2006, Yoon and Lee 2005). Therefore, when a fragment is case-marked, a compatible predicate is obligatorily selected (at LF). Specifically, case markers not only expect a predicate they also constrain the grammatical functions of the NPs that follow it (Nordlinger 1997). A nominative marked NP ((8)) expects intransitive, transitive or ditransitive predicates and in turn fills the subject position ((9)). An accusative marked NP ((10)) expects transitive or ditransitive predicates and fills an object position ((11)). The resolution of the null predicate is done by equation with the predicate of its antecedent clause (Dalrymple et al. 1991, Kehler and Shieber 1997, Dalrymple 2005). If the predicate required by the case-marked fragment does not match that of the antecedent, the equation fails ((12a, c)). An abstracted element in the source clause has to be matched with a constant in the target clause. Thus, among some possible predicates, only one is interpreted, producing one proposition ((12b)). Case connectivity of case marked FAs is explained: If a Nom-marked FA appears instead of an Acc-marked FA to the question of (1), predicates the Nom-marked FA anticipates do not match the predicate of antecedent, resulting in equation failure.

By contrast, when a fragment does not have a case marker, no predicate is required, since such fragments are not functors ((13)). Hence, the FA (13) is acceptable to both questions of (14), without case-matching. The property of caseless FAs is captured: They serve as arguments of abstracted element of the source clause without any constraint on their predicate, and consequently without any constraint on equation between a target predicate and a source predicate.

How do we explain the pattern of complementizer deletion? The lexical property of the complementizer is that it turns the constituent it is attached into a functor looking for the higher clause predicate (Choi and Yoon 2006). Now, fragments that lack a complementizer but have a declarative marker are interpreted as a root clause, since the declarative marker signals the end of a clause, which conflicts with the context that requires an embedded clause, resulting in equation failure. However, when both the complementizer and the declarative marker are deleted, the FA is interpreted like a caseless FA.

Finally, case drop is not allowed in multiple FAs because lexical specification of case markers allows case marked NPs to combine with each other anticipating a compatible predicate ((17)). The idea also explains the observation that multiple FAs are not allowed when they are from different clauses.
Fragments with and without Articulated Constituents at LF
Youngju Choi and James Yoon (University of Illinois at Urbana-Champaign)

(1) a. Yenghi-ka nwukwu-lul ttali-ess-ni?
   Y-Acc who-Acc hit-Pst-Q
   ‘Who did Yenghi hit?’

b. *Cheli-ka (NOM) case-marked FA
   c. Cheli-lul(ACC) case-marked FA
   d. Cheli (NO CASE) ‘(Yenghi hit) Cheli’ caseless FA (Korean)

(2) a. Naomi-ga dare-o nagnt-ta no?
   N-Nom who-Acc hit-Pst  Q          ‘Who did Naomi hit?’

b. *Kin- ga (NOM) case-marked FA
   c. ??Kin-o (ACC) case-marked FA
   d. Kin (NO CASE) ‘(Naomi hit) Kin’ caseless FA (Japanese)

(3) a. *Cheli-ka
   [Yenghi
   -ka
   t
   ttayli-
   ess-
   ta]
   b. Cheli-lul
   [Yenghi
   -ka
   t
   ttayli-
   ess-
   ta]

(4) a. Cheli-ka mwues-ulo congi-lul calu-ess-ni?
   C-Nom what-Inst paper-Acc cut-Pst-Q
   ‘With what did Cheli cut the paper?’

b. khal (NO CASE)
   c. Cheli-ka khal*(-lo) congi-lul calu-ess-ta
   C-Nom knife-Inst paper-Acc cut-Pst-Dcl
   ‘Cheli cut the paper with a knife’

(5) a. Cheli-nun Yenghi-lul mwue-la-ko sayngkakha-ni?
   C-Top Y-Acc what-Dcl-Comp think-Q
   ‘What does Cheli think of Yenghi?’

b. papo (NO MARKER)
   c. *papo-la (DCL)
   d. papo-la-ko (DCL-COMP) ‘He thinks of Yenghi as a fool’

(6) a. nwu-ka nwukwu-lul ttayli-ess-ni?
   who-Nom who-Acc hit-Pst-Q
   ‘Who hit whom?’

b. Yenghi-ka Tongswu-lul ‘Yenghi hit Tongswu’
   c. *Yenghi Tongswu

(7) a. nwu-ka ton-i philyoha-ni?
   who-Nom money-Nom need-Q ‘Who needs money?’

b. Cheli-ka (NOM)
   c. Cheli-eykey(DAT)

(8) Yenghi-ka (NOM)
   b. P (Yenghi, X)
   c. P(Yenghi, X, Y)

(10) Cheli-lul (ACC)
   a. P (X, Cheli)
   c. P(X, Cheli, Y)

(12) a. λY. hit (Y, Cheli), P (Yenghi) = failure
    b. λY. hit (Y, Cheli), P (Yenghi, X) = ‘Yenghi hit Cheli’
    c. λY. hit (Y, Cheli), P (Yenghi, X, Z) = failure

(13) Yenghi
(14) a. nwu-ka Cheli-lul ttayli-ess-ni?
   b. Cheli-ka nwukwu-lul ttayli-ess-ni?
   who-Nom C-Acc hit-Pst-Q C-Nom who-Acc hit-Pst-Q

(15) a. λY. hit (Y, Cheli) (Yenghi) = Yenghi hit Cheli
     b. λY. hit (Cheli, Y) (Yenghi) = Cheli hit Yenghi

(16) Yenghi-ka (NOM) Cheli-lul (ACC)
   a. P (Yenghi, Cheli) b. P (Yenghi, Cheli, X)

Phonological chain shifts during acquisition: Evidence for lexical optimization

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The phonological chain shifts exhibited by children during language development are challenging for theories of phonology because they reflect an opacity – a generalization that isn’t surface true. Based on diary studies of the phonological development of several children, aged 1;0-2;0, I propose an account for chain shifts of this sort by suggesting that they reflect multiple stages of lexical optimization (Prince & Smolensky 1993/2002).

The relevant period of one child, M’s, phonological development consists of three stages (1). In stage one, M’s phonology included the substitution of coronals with dorsals (1b; teeth [kik]). Stage two included a process where fricatives were replaced by plosives (1c; sock [tak]). This produced an s→t→k chain shift. Crucially, in stage two teeth still reflected the /t/→[k] change raising the question of why the [t] in sock didn’t change to [k] as well. In stage three, this chain shift is resolved as the /t/→[k] generalization disappears and teeth is produced with [t]. This type of chain shift is typical in child language acquisition as with the s→θ→f chain shift (Dinnsen & Barlow, 1998).

In current surface-based approaches to phonology such as Optimality Theory, no generalization can be stated concerning M’s phonology that holds true of both sock and teeth. If [kik] is used to motivate a constraint against coronals stops, as shown in the OT constraint ranking of *Coronal>Ident (2), it’s violated by sock [tak] (3). Accounts of developmental chain shifts of this sort (Dinnsen, 2006; Jesney, 2005) involve theoretical enhancements whose purpose is only to solve this particular problem and do not correlate with more general principles of acquisition. For example, Dinnsen & Gierut’s (2006) use comparative markedness (McCarthy, 2003) to posit that children differentiate between violations incurred by original /t/ as in teeth (through the constraint *[COR]O) versus violation incurred by new, or phonological derived [t] (through the constraint *[COR]N) as in sock [tak] (4). However, there is no additional evidence to support this solution.

Evidence for a more general solution to this problem is found in newly acquired words (1d). Even though teeth reflected a /t/→[k] change at stage two, new words such as table [tejbo] reflect the correct production of [t]. This suggests that the SR [kik] for teeth reflects a /k/ in the UR and that the /t/→[k] process is no longer productive. Thus, only the s→t generalization is active in stage two. This is similar to the “inertia” effects demonstrated in Menn (1971) where older words are resistant to recent changes in production and can be represented by positing /kik/ as the underlying form for teeth in (5). This change of the UR from /tiθ/ to /kik/ reflects lexical optimization – the assignment of an underlying form for teeth that incurs the fewest faithfulness violations. Given the surface form [kik], the UR with the fewest faithfulness violations is /kik/. The ranking of Ident » *Coronal at this stage shows that the t→k generalization is no longer active which accounts for the SR [tejbo] and produces the correct forms for teeth and sock (4). As teeth is heard more and more without the /t/→[k] generalization, eventually the UR reflects the new /t/→[t] generalization seen in stage three suggesting a second process of lexical optimization where the UR of teeth.

Therefore, in accounting for the phonological opacity found during language acquisition we find evidence for a crucial process in OT: the selection of UR through lexical optimization. Indeed, production data suggests that children go through multiple stages of lexical optimization prior to reaching the final adult grammar.
(1) The stages of the s>t>k chain shift in M’s speech

<table>
<thead>
<tr>
<th></th>
<th>Stage 1(1;0-1;4)</th>
<th>Stage 2(1;4-1;7)</th>
<th>Stage 3(1;7+)</th>
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<tbody>
<tr>
<td>a) cookie</td>
<td>kx.ki</td>
<td>k0.ki</td>
<td>k0.ki</td>
</tr>
<tr>
<td>b) teeth</td>
<td>kik</td>
<td>kik</td>
<td>tif</td>
</tr>
<tr>
<td>c) sock</td>
<td>n/a</td>
<td>tak</td>
<td>tak</td>
</tr>
<tr>
<td>d) table</td>
<td>n/a</td>
<td>tej.bo</td>
<td>tej.bo</td>
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(2) Optimality Theory ranking for teeth [kik]

<table>
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<tr>
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<th>/tiθ/</th>
<th>*[COR]</th>
<th>IDENT(PLACE)</th>
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<tbody>
<tr>
<td>(a)</td>
<td>→ kik</td>
<td><em>!</em></td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td>tiθ</td>
<td><em>!</em></td>
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(3) Optimality Theory ranking for sock [tak]

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<th></th>
<th>/sak/</th>
<th>*[COR]</th>
<th>IDENT(PLACE)</th>
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<tr>
<td>(a)</td>
<td>⊗ tak</td>
<td>*!</td>
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<tr>
<td>(b)</td>
<td>← kak</td>
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(4) Comparative markedness account of chain shifts:

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<th>/tiθ/</th>
<th>*[COR]o</th>
<th>IDENT(PLACE)</th>
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<tr>
<td>(a)</td>
<td>→ kik</td>
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<td>(b)</td>
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<td>(a)</td>
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(5) Optimality Theory ranking for sock [tak]

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<td>(a)</td>
<td>→ tak</td>
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<td>(b)</td>
<td>kak</td>
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(6) Optimality Theory ranking for teeth [kik]

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<tr>
<td>(a)</td>
<td>tθ</td>
<td><em>!</em></td>
<td>**</td>
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<td>(b)</td>
<td>→ kik</td>
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Selected References


Introduction
This paper presents an analysis of the syntax of the possibility nominal modal construction \((u/l\ swu iss-)\) sentences in Korean as illustrated in (1), and discusses the implications for compositional semantics. (1) is ambiguous between an epistemic reading (It is possible that Toli will sing) and an ability reading (Toli is able to sing). Ha (2005) treats \(-(-)l\ swu iss-\) as a unit, and argues that it can lexicalize both \(\text{Mod}_{\text{Epistemic}}\) and \(\text{Mod}_{\text{Root}}\) heads which occupy different positions in the clause structure. In this paper, I decompose \(-(-)l\ swu iss-\) into three parts: (i) \(-(-)l\) is an adnominal suffix, indicating that the verb \((nolayha \ ‘sing’)\) to which it is attached is part of a clause that modifies a noun; (ii) \(swu\) is a noun, as it can optionally take a nominative case marker under both epistemic and ability readings; and (iii) \(iss-\) is a copula. Thus, in my analysis, \(swu\), a nominal modal, is a head noun that takes a complement clause. Using this syntactic structure for sentences like (1), I argue that the source of the ambiguity is not the nominal \(swu\), but the existential and the possessive structures supported by the copula \(iss-\). I propose that the epistemic reading is generated by an intransitive structure that has a complex NP as a subject (\(NP_1\) in (2a)) of an existential P head (\(P_{\text{Ex}}\)), and the ability reading is generated by a double nominative structure that has a complex NP as an internal argument (\(NP_2\) in (2b)) of a possessive P head (\(P_{\text{Have}}\)).

Syntactic Structure
The motivation for adopting an ambiguous structure for (1) comes from an independent fact of Korean that the copula \(iss-\) can take either a single nominative-marked NP or two nominative-marked NPs. The \(iss-\) sentence with a single nominative NP (as in (3a)) has an existential reading, and the one with two nominative NPs (as in (3b)) has a possession reading. I adopt ideas from Freeze (1992) and Kayne (1993) and postulate that the existential structure and the possessive structure have an abstract P in the clause structure. Following Harley’s (2002) extension of Freeze’s P, I postulate that the existential and possessive structures are projections of two different P’s: the existential structure is a projection of \(P_{\text{Ex}}\), as in (4a), and the possessive structure is a projection of \(P_{\text{Have}}\) with the possessor argument generated in the specifier and the possessees argument generated in the complement, as in (4b). In both possessive and existential structures, the copula \(iss-\) is inserted in \(v\).

The possibility nominal modal construction in (1) is formed with the same copula \(iss-\), and as such, (1) should be able to instantiate both the intransitive existential structure and the transitive possessive structure. I argue that this structural ambiguity results in an interpretive ambiguity: the intransitive existential structure (2a) generates the epistemic reading, and the transitive possessive structure (2b) generates the ability reading. The proposed structural ambiguity receives support from negative polarity item (NPI) licensing. In Korean, an NPI can appear in both the subject and the object position as long as there is a licensor (negation) in the same clause (Clause-mate Condition, Choe (1988)). It has been observed by Ha (2005) that while \(-(-)l\ swu iss-\) sentences with negation and an object NPI allow both the epistemic and the ability reading, as in (5a), those with negation and a subject NPI allow only the epistemic reading, as in (5b). With the proposed structures, this observation is a direct consequence of the Clause-mate Condition. In (5a), the object NPI is in the same clause as the negation, under both the intransitive and transitive analyses. Therefore, the NPI is licensed under both the ability and the epistemic reading. However, in (5b), the subject NPI is in the same clause as the negation only under the intransitive analysis. Therefore, the NPI is licensed only under the epistemic reading. In terms of meaning, the ability to bring about a certain situation requires a possessor of that ability, whereas the epistemic possibility of a certain situation does not require a possessor. This is consistent with the proposed structures: in the transitive structure, the first NP has the role of the possessor of the ability, whereas the intransitive structure without a possessor role has the epistemic reading.

Compositional Semantics
I use (6a) for the semantics of copula \(iss-\), and (6b) (Barwise and Cooper 1981, Chierchia 1998) and (6c) for the semantics of \(P_{\text{Ex}}\) and \(P_{\text{Have}}\), respectively. Taking the NPs as generalized quantifiers, I show that the meaning of (3a) and (3b) can be derived compositionally, resulting in (7a) and (7b). With the addition of world variables to capture the intensionality arising from the modality, I show that the compositional semantics on the possibility nominal modal structure can be done in a similar way, resulting in (8a) for (2a) and (8b) for (2b). Under the proposed analysis, ‘possibility + possession’ is ‘ability’.

Conclusion
I have correlated the structural ambiguity supported by the copula \(iss-\) with epistemic and ability readings in the possibility nominal modal construction. The proposed work reveals another instance of a close connection between existential and possession expressions across languages, and explores how they interact with modality. It remains as future work to test the cross-linguistic generality of the proposed analysis that the meaning of ability includes the meaning of possession.
(1) Toli-ka nolayha-l swu-(ka) iss-ta.
Toli-Nom sing-Adnom possibility-(Nom) be-Decl

(2) a. Epistemic reading

\[
\begin{array}{c}
\text{vP} \\
\text{PP} \\
\text{NP}_1 \\
\text{N} \\
\text{swu-ka} \\
\text{possibility-Nom} \\
\text{Toli-ka} \\
\text{Toli-Nom} \\
\text{sing-Adnom} \\
\end{array}
\]

b. Ability reading

\[
\begin{array}{c}
\text{vP} \\
\text{PP} \\
\text{NP}_1 \\
\text{N} \\
\text{swu-ka} \\
\text{possibility-Nom} \\
\text{PRO nolayha-l} \\
\text{PRO sing-Adnom} \\
\end{array}
\]

(3) a. Mwuncey-ka iss-ta.
Mwuncey-Nom be-Decl
‘There is a problem.’

b. Toli-ka mwuncey-ka iss-ta.
Toli-Nom problem-Nom be-Decl
‘Toli has a problem.’

(4) a. \[
\lambda x. x \quad \text{(identity function)}
\]
b. \[
\lambda x. x = x
\]
c. \[
\lambda y \lambda x. \text{Poss}(x, y)
\]

(5) a. Toli-ka amwukesto an masi-l swu-ka iss-ta.
Toli-Nom anything Neg drink-Adnom possibility-Nom be-Decl
‘Toli has the ability to not drink anything.’ (ability reading)
‘There is a possibility that Toli will not drink anything.’ (epistemic reading)

b. Amwuto maykcwu-lul an masi-l swu-ka iss-ta.
anyone beer-Acc Neg drink-Adnom possibility-Nom be-Decl
*‘Nobody has the ability to drink beer.’ (ability reading)
‘There is a possibility that nobody will drink beer.’ (epistemic reading)

(6) a. \[
\exists x \exists y \exists z \quad \text{(exists twice)}
\]
b. \[
\exists x [\text{problem}(x) \land x = x] = \exists x [\text{problem}(x)]
\]

(7) a. \[
\exists x [\text{problem}(x) \land x = x] = \exists x [\text{problem}(x)]
\]
b. \[
\exists x [\text{problem}(x) \land \text{Poss}(toli, x)]
\]

(8) a. \[
\lambda w. \exists w'' \in \text{Epi}(w) [\text{sing}(toli, w'') \land w'' = w''] = \lambda w. \exists w'' \in \text{Epi}(w) [\text{sing}(toli, w'')]
\]
‘There is a world \(w''\) that is epistemically accessible from the world of evaluation \(w\) such that Toli sings in \(w''\);’

b. \[
\lambda w. \exists w'' \in \text{Epi}(w) [\text{sing}(toli, w'') \land \text{Poss}(toli, w'')] = \lambda w. \exists w'' \in \text{Epi}(w) [\text{sing}(toli, w'')]
\]
‘There is a world \(w''\) that is epistemically accessible from the world of evaluation \(w\) such that Toli sings in \(w''\) and Toli is in a possession relation with \(w''\).’

Fixed Abode. What Topical Indefinites and Wh-terms Have in Common

Stefan Hinterwimmer & Sophie Repp (Humboldt University Berlin, Germany)

We argue that different information structural units can come with different alternative sets, more specifically, the alternatives coming with (contrastive) topics can differ from the ones coming with (contrastive) foci. This is surprising for some accounts of contrastive topics, e.g. [ii]. Our test case are elliptical structures with indefinites on the one hand, and wh-phrases on the other. (1) is a gapping sentence with indefinites. On the surface, there is no contrast between the elements before the gap (\textit{Ehe Frau}), which is surprising from the point of view of ellipsis because ellipsis requires contrast. Obviously, there is a contrast here – we understand (1) as involving two different woman individuals, cf. [v]. A prerequisite for the grammaticality of this construction is the special prosody, i.e. the rising accent on the determiner, which has been suggested to indicate topicality, e.g. [ix]. Next compare a variant of (1), viz. (2), where the identical indefinites appear in post-gap position. The result is ungrammatical. Following e.g. [xi], we assume that the contrastive elements before the gap are topics, and the elements after the gap, foci. We propose that when contrasted, topics can take recourse to different alternative sets from foci. We assume with [x] that topics are discourse referents with a discourse address. For topical indefinites, which introduce novel discourse referents, this means that they fix an address for a discourse referent. This condition is stronger than the novelty condition on ‘ordinary’ indefinites: it is not possible to create two addresses for the same individual. ♦ As shown in (5) vs. (6), only determiners from a well-defined set of quantificational determiners, which essentially comprises the indefinite article and unmodified numerals can occur in pre-gap position. Quantificational DPs headed by other determiners can only be felicitously contrasted if there is an ‘overt’ contrast as in (7). We assume that only atomic individuals or sum individuals can serve as entities for which an address is created but not sets of sets of individuals (i.e. quantifiers): the latter are too complex objects. Only for quantifiers of the first kind representatives in the form of (minimal) witness sets ([ii]) are defined (see [iv]), which means that only in these cases, sets are available which can be turned into (atomic or sum) individuals. During address creation, a label – say [A1], [A2], etc., – is created for each of these individuals, and some information – namely the comment coming with the topic – is stored under the address. When we contrast topical indefinites we contrast the addresses, not the denotations of the quantificational DPs on the basis of which the addresses were created. ♦ Now, gapping with multiple wh-questions shows the same asymmetry between pre- and postgap material, see (8) vs. (9), and (10) vs. (11). We assume that wh-phrases share certain features with topics, viz. the ability to create addresses for storing information: It is often assumed that wh-phrases in interrogatives introduce a referent by presupposition (e.g. [iii], [viii]). Importantly, the interrogative requires that more information be provided about this referent. Thus, essentially, an address is created under which the information to be supplied by the answer is to be stored. The answer to a wh-question can be seen as a predicate that applies to the individual introduced by the wh-term, as given in (13) for the dialogue in (12). Thus, the information predicated of the individual corresponding to the address [A1] is that this individual is identical to Peter and that it gave the book to Mary. Formally, we assume that proper names (\textit{Peter}) can be shifted to predicates with the denotation $\lambda x. x=\text{Peter}$. This predicate is then combined with the predicate denoted by the rest of the clause via predicate modification (cf. [vii]), giving us (13). As for multiple questions, we assume that all wh-terms introduce addresses. (14), which is a variant of the ungrammatical (9) is an instance of auxiliary gapping where not only the first wh-phrase but also the second wh-phrase is the same in the two conjuncts. (14) is good because of the presence of the contrastive predicatives (\textit{read, tear up}). Thus, all that is required is some contrast in the comments which apply to the respective ‘topics’ (cf. [iii]). The predicate is the ‘comment’ coming with the second wh-phrase, both of them together are the comment coming with the first wh-phrase. For multiple wh-questions with two ‘overt’ contrasts we assume that the second wh-determiner can use its own NP complement as the contrastive element in the comment. This analysis is supported by the fact that it is not possible to elide the second identical wh-phrase in (16) (compare to (14) and (15)). We assume that this is a result of the address-creating function of wh-phrases: In the first conjunct \textit{welcher Student} (‘which student’) presupposes the existence of a set of
students who read a book and in the second conjunct welcher Student presupposes the existence of a set of students who tore books up. Thus, the respective sets differ, which precludes ellipsis.

SMALL CAPS indicate accents, `/` is a rise, `\` is a fall.

(1) /Eine Frau schrieb dem Di/REKtor und /Eine Frau _ dem De\KAN.
   ‘Someone woman wrote to the director and someone woman to the dean.’

(2) *Dem Di/REKtor schrieb /Eine Frau und dem De\KAN _ Eine Frau.
   ‘To the director, someone woman wrote, and to the dean, someone woman.’

(3) /MAX hat ein Buch gelesen und Ma\ria hat ein Buch gelesen. Vielleicht war es das \GLEiche.
   ‘Max read a book and Maria read a book. Maybe it was the same one.’

(4) /EIN Buch hat /MAX gelesen und /EIN Buch hat Ma\ria gelesen. #Vielleicht war es das \GLEiche.
   ‘One book, Max read and one book, Maria read. Maybe it was the same one.’

(5) /DREI Kinder haben /SAFT getrunken und /DREI Kinder \TEE.
   ‘Three children drank juice and three children tea.’

(6) * Weniger als /DREI Kinder haben /SAFT getrunken und weniger als /DREI Kinder \TEE.
   ‘Less than three children drunk juice and less than three children tea.’

(7) Weniger als /DREI Kinder haben /SAFT getrunken und weniger als /VIER Kinder \TEE.
   ‘Less than three children drank juice and less than four children tea.’

(8) /WELcher Student las welches /BUCH und /WELcher Student welchen Ar\TIkel?
   ‘Which student read which book and which student which article?’

(9) *Welches /BUCH las /WELcher Student und welchen Ar\TIkel /WELcher Student?
   ‘Which book did which student read and which article which student?’

(10) /WELches Buch las welcher /STUDENT und /WELches Buch welcher Pro\FESSor?
    ‘Which book did which student read and which book which professor?’

(11) *Welcher Stu\DENT las /WELches Buch und welcher Pro\FESSor /WELches Buch?
    ‘Which student read which book and which professor which book?’


(13) [λy. y = Peter & Gave_ book_ Mary(y)] ([A1])

(14) /WELches Buch hat /WELcher Student ge\LESen und /WELches Buch /WELcher Student zer\RISSen?
    ‘Which book did which student read and which book did which student tear up?’

(15) /WELches Buch hat Peter ge\LESen und /WELches Buch zer\RISSen?
    ‘Which book did Peter read and which book did Peter tear up?’

(16) */WELches Buch hat /WELcher Student ge\LESen und /WELches Buch zer\RISSen?
    ‘Which book did which student read and which book did which student tear up?’

Quantified Phrases without NP
Tomio Hirose and Takeru Suzuki
Kanagawa University/Tokyo Gakugei University

Background: In terms of the DP hypothesis (Abney 1987), quantified phrases (QPs) such as *something* are analyzed not as NPs, but as DPs comprising the determiner head and their designated NP complement (e.g., \[DP \text{ some \ [NP thing]}/\]). QPs in Japanese can be treated likewise (Takahashi 2002). For example, the existential QP *nanika* ‘something’ is analyzed as consisting of *nani* heading the NP complement and -*ka* as the determiner head (e.g., \[DP \text{ [NP nani] ka}]/). Similarly for wh-QPs such as *nani* ‘what’ with the null interrogative determiner (e.g., \[DP \text{ [NP nani] wh}]/).

Problem: If QPs contain both NP and DP, and if the scope of restrictive modification is NP and that of non-restrictive modification is DP (Demirdache 1991), QPs ought to undergo both types of modification. This is the case for English, as in (1). By contrast, the Japanese QPs resist restrictive modification; to the extent that the examples in (2) are acceptable, *nanika* and *nani* are interpreted to be “specific” and the adjectival modifiers are of the “non-restrictive” type. The question is why such a difference arises, when QPs of the two languages have the identical syntactic structure (cf. Watanabe 1992).

Proposal: In this paper we propose that the Japanese QPs are “QPs” comprising the Q head taking a designated DP which, crucially, lacks NP (e.g., \[QP \text{ [DP nani] ka/wh}]/; cf. \[QP \text{ some \ [DP \emptyset [NP thing]]}]/). One motive for this is the fact that alleged NPs or so-called *indeterminates* (Kuroda 1965) such as *nani* never serve as a noun head elsewhere, unlike the English “light noun” counterparts (e.g., *a strange thing*).

Predictions: The claim we are making leads to three predictions. First, with NP missing, QPs in Japanese should resist NP-scope modification, as seen in (2). Second, related to the first prediction, if *nani* and *nanika* are to be “non-specifically” interpreted, an alternative, “periphrastic” construction that allows for NP-scope or restrictive modification must be adopted, as in (3); note the use of the light noun *mono* ‘thing’ that makes restrictive modification possible. Third, the negative polarity quantifier *nanimo* ‘any/nothing’ is incompatible with non-restrictive modification, as in (4a), being non-specific by nature; the periphrastic counterpart is well-formed, as in (4b), with no modification applying to *nanimo* itself.

Implications: The proposal has several implications. First, nounless QPs such as *nanika* and *nani* can be used as adverbials, as in (5). This property may be due to their lack of NP: without NP (i.e., the predicative constant), they need not be either predicates or arguments and can be licensed otherwise, i.e., as TP-scope adjuncts. Second, numerals such as *sannin* ‘three people’ can be treated like *nanika* here, as indicated by (6), where the same specific and non-restrictive readings as in (2a) obtain. Third, inasmuch as numerals are nounless QPs, they, by definition, should not be able to take an NP complement, thus arguing against the widely accepted view of numerals as the complementing head “Num” that takes an NP in (7) (Kawashima 1998). Finally, the thesis that restrictive modification goes with “light-noun-based” QPs, but not with “indeterminate-based” QPs, might hold more generally—beyond English and Japanese.
(1) a. I ate something [(that was) hot]. restrictive modification
   b. I ate something. [which was hot]. non-restrictive modification

(2) a. kimi-wa karai nanika-o taberu. nanika = specific
      you-TOP hot something-ACC eat karai = non-restrictive
   b. kimi-wa karai nani-o taberu-no? nani = specific
      you-TOP hot what-ACC eat-Q karai = non-restrictive

(3) a. kimi-wa nanika karai-mono-o taberu. nanika = non-specific
      you-TOP something hot-thing-ACC eat karai = restrictive
   b. kimi-wa karai-mono-wa nani-o taberu-no? nani = non-specific
      you-TOP hot-thing-TOp what-ACC eat-Q karai = restrictive

(4) a. *kimi-wa karai nanimo tabe-nai. nanimo = *specific
      you-TOP hot anything eat-NEG karai = non-restrictive
   b. kimi-wa nanimo karai-mono-o tabe-nai. nanimo = non-specific
      you-TOP anything hot-thing-ACC eat-NEG karai = restrictive

(5) a. nan(i)ka ano hito-wa sinyoo-deki-nai.
      something that person-TOP trust-can-NEG
   ‘For some reason, I can’t trust that person.’
   b. nani-o kimi-wa sonna tokoro-de naiteiru-no?
      what-ACC you-TOP such place-LOC crying-Q
   ‘Why are you crying in such a place?’

(6) wakai san-nin-ga yameru. sannin = specific
      young 3-person-NOM quit wakai = non-restrictive

      I-TOP book-ACC 3-CL write

References
among-sentences

The talk concerns itself with sentences like (1a), in which a transitive verb appears to take a PP headed by *among* as its object. We argue that *among*-phrases (boldfaced in (1a)) modify a preceding null nominal, and propose an analysis which links *among*-sentences to partitive phrases (Jackendoff 1977) and amount relatives (Carlson 1977). Our account captures the conditions on *among*-phrases, and their differences from ordinary partitives.

**Conditions:**
(i) The preposition must be *among*; (1b) is ill-formed on the relevant reading.
(ii) The null nominal must be plural; (2) entails that we elected several presidents.
(iii) The DP complement of *among* must be modified by *only*, a superlative, or an ordinal (3).
(iv) The *among*-phrase may be the subject of a passive, but not of a transitive verb (4).

**Analysis:** We claim that the null nominal appearing in *among*-sentences is the one appearing in Carlson's (1977) amount relatives. We posit a NumP dominated by DP, the head of which specifies whether the noun is singular or plural. In (5), NumP moves out of the PP headed by *among*, then Merges to PP and projects. We compare this movement and projection of NumP to the movement and projection of the head of a relative clause, in the raising analysis of relative clauses (Kayne 1994, Bianchi 2000); both movements create structures in which a nominal head is modified (by a relative clause, or by an *among*-PP). The tail of the chain must be pronounced, perhaps because the DP has been linearized on a previous phase (Fox and Pesetsky to appear).

**Condition (i): among-phrases and partitives** The contrast in (1) mirrors the one in (6); following Jackendoff (1977), we posit a null nominal in partitives. The *among*-phrase is like the partitive (6a) both in its partitive meaning and in having a null nominal before the PP. But conditions (ii-iv) distinguish between *among*-phrases and partitives. For us, partitives and *among*-sentences both have a movement like the one in (5), with the tail of the chain pronounced; they differ in that *among*-sentences move NumP, while partitives move only NP, and Merge a separate instance of Num at the head of the resulting phrase. Compare the *among*-phrase derivation in (5) to the partitive phrase derivation in (7).

**Cond. (ii): NumP movement** Unlike the null nominal in partitives, the null nominal in *among*-phrases must agree with the overt DP in number (and this DP must be plural, as usual for the object of *among*): (2) vs. (6a). Also unlike partitives, the *among*-phrase contains no numeral preceding the null nominal. We link these facts; the moved phrase in an *among*-phrase is a NumP, so the value of Num\(^0\) in the head and tail of this chain (the null nominal and the object of *among*) must be identical. By contrast, the moved phrase in a partitive is only an NP, so the Num heads need not agree in value.

**Cond. (iii): Amount relatives** Condition (iii) also constrains amount relatives with singular definite heads (7) and infinitival subject relatives with non-modal interpretations (8). Following Bhatt (1999), we take (iii) to reflect a degree variable *d-many* in Num, which must be bound by modifiers like *only*. In *among*-sentences, this binding is achieved after reconstruction of the movement in (5). (iii) does not hold in partitives, since Num is not a variable in partitives.

**Cond. (iv): NumP’s restricted distribution** NumP may move to external subject position (4b), but not from internal subject position (4c). In our account, the empty category preceding *among*-phrases is functionally impoverished, lacking some of the functional structure of a full DP (everything at or above modifiers like *only*). We derive the restrictions on NumP’s distribution from its functional impoverishment. We predict correctly that amount relatives cannot have gaps in transitive subject position; (10a) has an amount reading, but (10b) has only a non-amount reading. We extend our account to deal the similar clitic facts in (11).
(1) a. The Afghan kings designed among the most extensive irrigation systems of their day.  
   b. *The Afghan kings designed between/at/... the most extensive irrigation systems...
(2) In 2000 we elected among the stupidest Presidents we've ever had  
   [reading: more than one president was elected]
(3) a. The kings designed among the first/only/most extensive irrigation systems...
   b. *The kings designed among the (extensive) irrigation systems...
(4) a. Stephen King wrote among the scariest books of the twentieth century.  
   b. Among the scariest books of the twentieth century were written by Stephen King.  
   c. *Among the scariest books of the twentieth century have made Stephen King very rich.
(5) a. [PP among [DP the scariest [NumP PL [N books]]]]  
   b. [NumP PL [N books]] [PP among [DP the scariest [NumP PL [N books]]]]  
   z-------------------------m [movement of NumP]
   c. [NumP PL [N books]] [PP among [DP the scariest [NumP PL [N books]]]]  
   z-------------------------m [tail of chain pronounced]
(6) a. one __ of/among the scariest books  
   b. *one __ between/at... the scariest books
(7) a. [PP of [DP the scariest [NumP PL [N books]]]]  
   b. [NumP one [N book]] [PP of [DP the scariest [NumP PL [N books]]]]  
   z-------------------------m [move of NP]
   c. [NumP one [N book]] [PP of [DP the scariest [NumP PL [N books]]]]  
   z-------------------------m [tail pronounced]
(8) a. the only/first/tallest man [that there was __ on the island]  
   b. *the (tall) man [that there was __ on the island]
(9) a. the only/first/tallest boy [ __ to climb Mt. Everest]  
   b. *the (tall) boy [ __ to climb Mt. Everest] [good only on a modal reading]
(10) a. John took everything [that he could fit __ in his pockets]  
    [amount reading: John took the largest amount that he could fit in his pockets]
   b. John took everything [that __ would make his pockets feel nice and full]  
    [non-amount reading: John took each individual object that would make his pockets feel nice and full]
(11) a. Pierre en a lu la préface.  
    Pierre of.it has read the preface  
    'Pierre has read its preface'
   b. La préface en a été publiée.  
    the preface of.it has been published  
    'Its preface has been published'
   c. *La préface en a gagné un prix.  
    the preface of.it has won a prize  
    'Its preface has won a prize'

Selected References
This paper investigates the referential properties of reciprocal pronouns in Finnish. The reciprocal stem in Finnish is *toinen* ‘other’, which is (i) used alone with a possessive suffix (Px), (one-word form, (1a)), or (ii) doubled (1b), with the first occurrence of *toinen* being indeclinable and the second marked with a possessive suffix (Hakulinen et al. ‘04). **What guides the choice of the one-word form vs. the doubled form?** I extend work by Beck (‘01) and Brisson (‘98,’03) to Finnish and suggest, based on exception effects, that the doubled form increases the salience of certain interpretational possibilities, resulting in the doubled form having less tolerance for exceptions than the one-word form.

**Weak/strong.** Both the one-word and the doubled form can occur with strong (SR, 2a) and weak reciprocal (WR, 2b) readings. (1a,b) can both be judged true when every child tickles every other child and when for each child x, there exists at least one child tickled by x and at least one child that tickles x.

**Exceptions.** Dalrymple et al (‘98), Beck (‘01) note that in English (3a) is true in (3b) with an unstared-at pirate (partial participant). Beck notes that (3a) is also true in (3c), with a pirate who is neither stared-at nor staring at another pirate (non-participant). Beck derives these weakened readings from WR with covers (Schwarzschild ‘96) which enable distribution over salient sub-parts of a plurality. Salient subpluralities constitute ‘cells’ of the cover (Brisson ‘98:73). Beck makes use of ill-fitting covers (Brisson ‘98); a cover may not have a subset that covers the entire plurality we are concerned with. A pirate not included in the covered subset can be a partial/non-participant, since the semantics ‘doesn’t care’ whether he participates in the staring relation (see Brisson ‘98:83). The Finnish one-word form is more tolerant of exceptions. It is better suited for situations with a partial/non-participant than the doubled form. In a context with one child who is a partial/non-participant (cf. 3b,3c), the one-word form (1a) is judged to sound better than the doubled form (1b), which tends to be rejected by native speakers in such contexts. In contrast, in a WR/SR context without partial/non-participants, the doubled form seems fine.

**Good-fit.** Building on Brisson’s (‘98) analysis of all (also ‘03), I hypothesize *toinen* in the doubled form acts as an operator on the set of contextually-available covers, increasing the prominence of particular covers, such that the function assigning values to cover variables can only choose from these prominent covers. Following Brisson on all, I claim *toinen* makes good-fitting covers highly salient. A cover is a good fit with a given set (subj DP denotation) if no set member is in a cell with elements that are not members of the set (Brisson,p.94). Good-fit covers don’t allow exceptions (no partial/non-participants); ill-fit covers do. In Finnish one-word forms seem tolerant of ill-fit readings, in contrast to doubled forms (1a,b). If *toinen* increases salience of good-fit covers, other factors influencing cover salience should also influence use of doubled forms. Adopting a Gricean-type view, I predict (i) speakers are more likely to use doubled forms when a weakened reading (ill-fit cover, non-/partial participants) might otherwise arise; (ii) when good-fit covers are salient due to other factors, good-fit readings can be available without doubling. For definite plurals, Brisson notes large pluralities and non-individuated referential forms are more likely to allow ill-fit covers than small groups and names. If Finnish doubled forms make good-fit covers salient, I predict (i) with large pluralities and/or non-individuated DPs: doubled forms result in good-fit readings, one-word forms allow ill-fit readings; (ii) with small pluralities and/or specific DPs (predisposed to good-fit): good-fit readings can emerge even with one-word forms.

**DP form.** If names are used (4), there seems to be a bias for a good-fit reading with both the one-word and doubled forms. This contrasts with (1b), with a non-individuated antecedent, where only the doubled form induces a bias towards a good-fit interpretation. Without doubling, (1a) allows an ill-fit interpretation, as predicted. If we compare a small plurality vs. a larger plurality (5), native judgments suggest a good-fit reading is more likely to arise with the one-word form in the small-plurality situation. With a large plurality, the doubled-form is important for creating a preference for the good-fit reading.

**Conclusion.** Finnish has a one-word reciprocal pronoun and a doubled form. Based on exception effects, I suggest (building on Beck, Brisson) that *toinen* in the doubled form operates on the set of
contextually available covers, increasing the discourse prominence of good-fit covers. This approach captures the interpretive consequences of the interaction of reciprocal form with DP form and plurality size, claimed to have an effect on cover salience, and contributes to our understanding of the division of labor in reciprocal paradigms of languages with multiple reciprocal forms available.

Data

(1a) Lapset kutittavat toisiaan.
Children-NOM tickle-3 PL other-PL-PARTITIVE-Px3
‘The children tickle each other.’

(1b) Lapset kutittavat toinen toisiaan.
Children-NOM tickle other-NOM other-PL-PARTITIVE-Px3
‘The children tickle each other.’

(2a) Strong reciprocity (from Beck 2001, see also Fiengo/Lasnik 1973)
∀x ≤ A: ∀y ≤ A [y ≠ x → xRy]
A = group denoted by antecedent of reciprocal
R = relation that holds b/w members of group A

(2b) Weak reciprocity (from Beck 2001)
∀x ≤ A: ∃y ≤ A [xRy & x ≠ y] & ∀y ≤ A: ∃x ≤ A [xRy & x ≠ y]

(3a) The pirates stared at each other.

(3b) Partial participant

(3c) Non-participant

(diagrams from Beck 2001)

(4) Liisa, Anu, Mika, Lassi ja Matti kutittavat toisiaan // toinen toisiaan.
‘Liisa, Anu, Mika, Lassi and Matti tickle each other.’

(5) KOLME / KOLMEKYMMENTÄ lasta leikkii pihalla. Lapset kutittavat toisiaan / toinen toisiaan.
‘Three / thirty children are playing in the yard. The children tickle each other.’

References

Hiatus resolution in Hiroshima Japanese
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SYNOPSIS: This paper documents and analyzes patterns of hiatus resolution found in Hiroshima
Japanese, a dialect which has been understudied in the Generative literature. From our analysis of the
hiatus resolution, three theoretical consequences arise: (i) palatalization should be represented as
[-back] rather than [-back, +high], (ii) faithfulness must be governed by MAX(F), not by IDENT(F),
and (iii) various kinds of positional faithfulness constraints interact with each other to shape
phonological patterns.

DATA: When the accusative case particle /o/ is attached to root-final back vowels, it assimilates to
the root vowel (e.g. /sor+a+o/→[sor+an], ‘sky’; /sar+u+o/→[sar+uu] ‘monkey’). When the root-final vowel is
[e], the preceding consonant palatalizes, [e] deletes, and the particle /o/ lengthens, as in (1). Finally,
when the root-final vowel is [i], the preceding consonant palatalizes, [i] deletes, and the following /o/
raises to [u], as in (2).

(1) /Ce+o/ → [C+oo] (2) /Ci+o/ → [C+uu]
/kane+o/ → [kanj+oo] ‘money’ /kan+i+o/ → [kan+uu] ‘crab’
/hatak+e+o/ → [hatakj+oo] ‘field’ /tor+i+o/ → [tor+uu] ‘bird’

ANALYSIS: Since a heteromorphemic vowel sequence cannot be parsed either as a diphthong or a
hiatus, we use an encapsulated constraint *VV (=*Diphthong+*Hiatus). The progressive
assimilation of /o/ to back root vowels arises from a well-established ranking bias FAITHRoot »
FAITHAffix (Beckman 1998; McCarthy and Prince 1995). Turning to front vowels, since both [e] and [i]
cause palatalization, we assume C^j is [-back]. We propose that to resolve /e+o/ sequences, Hiroshima
Japanese prefers palatalization (i.e. [C+oo]) to assimilation (i.e. [Coo] or [Cee]) because palatalization
preserves both the [-back] feature of the root vowel and the [+back] feature of the particle vowel. This
analysis is illustrated in (3)

(3) /kane+o/ *VV MAX([-back]Root MAX([+back]Affix *C^j
 a. → kanj+oo *!
 b. kanero *!
 c. kanoo *!
 d. kanee *!

Finally, we analyze the change /Ci+o/ → [C+uu] in (2) as fission: [i]’s [-back] docks onto the
preceding consonant and its [+high] docks onto the following vowel, as illustrated in (4).

(4) µ1 µ2 µ1 µ2
 C i o → C^j u
 \[-back\]3 [+high]4 \[-back\]3 [+high]4
The mapping in (4) requires MAX(-back) and MAX(+high), because these features survive even when the host segment of these features deletes at the surface. The tableau in (5) illustrates the necessity of MAX(F) constraints: IDENT constraints would favor losers.

<table>
<thead>
<tr>
<th></th>
<th>*VV</th>
<th>MAX(-bk)Rti</th>
<th>MAX(+hi)Rti</th>
<th>Id(-bk)</th>
<th>Id(+hi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>C1uu1,2</td>
<td>*</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>C1o2</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>Cuu1,2</td>
<td>*</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>d.</td>
<td>C1o02</td>
<td>*</td>
<td></td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>

The mapping in (4) and (5) also shows that palatalization must be represented as [-back], not as [-back, +high]. If the underlying [+high] could be realized as a part of palatalization, that would satisfy MAX(+high), making the raising of /-o/ unnecessary.

**FURTHER DATA:** We observe two further generalizations. First, monosyllabic words do not undergo palatalization, but instead deletes [o] and lengthens the root vowel, as in (6). Second, underlying long vowels cannot be reduced to palatalization, as in (7).

(6) /ki+o/ → [ki], *[k[i]u] ‘tree’ cf. /kani+o/ → [kani] ‘crab’
/m[e]+o/ → [me], *[m[oo] ‘eye’ cf. /kane+o/ → [kan’oo] ‘money’

(7) /kake+o/ → [kake], *[kak[oo] ‘family budget’
/koohi+o/ → [kooh], *[kooh’u] ‘coffee’

The blockage of palatalization in (6) is due to DEP(pal)Initial-C, which prohibits a change in palatality of root-initial consonants (Beckman 1998). Long vowels’ resistance to reduction to a secondary palatal articulation in (7) can be explained by MAX(root node)LongVowel.

**DISCUSSION:** The above analysis bears on three theoretical issues. First, palatalization (in Hiroshima Japanese) should be phonologically represented as [-back] (Ni Chiosáin 1991) rather than [-back, +high] (Keating 1988) or [+high] (Lahiri and Evers 1991). Second, the fission mapping in (4) and (5) shows that MAX(F) constraints—rather than IDENT(F) constraints (McCarthy and Prince 1995)—regulate featural faithfulness relations between input and output (Casali 1996; Causley 1997; Lombardi 1998). Third, the patterns motivate various kinds of positional faithfulness constraints (Beckman 1998; Casali 1996): the assimilation of /o/ to root vowels requires root-specific faithfulness constraints, the blockage of palatalization of root-initial consonants in (6) requires faithfulness constraints specific to root-initial consonants (Beckman 1998), and the resistance of long vowels to reduction in (7) requires faithfulness constraints specific to long vowels (Steriade 1994).

Multiple Case Marking as Case Sharing: Adverbial vs. Adnominal Case

Puzzles. Floating quantifier constructions (FQCs) and inalienable possession constructions (IPCs) allow multiple Case marking in Korean. A noun and its associated quantifier may share the same Case, as in (1). A possessor and a possessee may bear the same Case, as in (2). Note, however, that Case patterns in FQCs and IPCs diverge in derived contexts. As in (3), Case match in FQCs is obligatory even in so-called ECM (exceptional Case marking) contexts where the host nominal receives an accusative Case from the matrix verb. In contrast, Case match in IPCs is only optional, as shown in (4). Given (1-2), it has been argued that Case match in FQCs and IPCs must be analyzed in the same way (Kim 1990; cf. Yoon 1990, Maling & Kim 1992). The contrast between (3) and (4) is unexpected under such accounts, however.

Proposal. I propose that multiple Case marking is a result of Case sharing among verbal head, Tense head, and maximal projections in-between (cf. Frampton et al 2000, Pesetsky and Torrego 2007, among others, for feature sharing in general). Specifically, following Pesetsky and Torrego (2007), I claim that Case is an uninterpretable Tense feature ($uT$), and that Case ($uT$) is licensed when it shares an interpretable Tense feature ($iT$) by being placed between a Tense head (unvalued interpretable T: $iT$) and verbal head (valued uninterpretable T: $uTv$). If multiple elements are placed between a Tense and verbal head, they all share the same Case ($uT$) feature. I assume that nominative Case-marking is a result of sharing T-features among T, $v$, and maximal projections [(5)]. Accusative Case-marking is assumed to be a result of sharing T-features among ArgO, V, and maximal projections in-between [(6)].

Analysis. Under the current proposal, Case (mis)match in (1-4) receives a straightforward account when we consider underlying constituency of FQCs and IPCs. Ko (2007) argues that a Case-marked FQ and its host NP do not form a constituent, whereas the possessor and possessee form a constituent in underlying structure, as depicted in (7-8) (see Ko 2005 for independent evidence for this; cf. Ura 1996, Choe 1987). On this view, the FQ is in $vP$-spec as an adverb. The possessor is in DPspec as an adnominal phrase.

FQC. Under Ko’s analysis, we expect that Case sharing in FQCs would be obligatory regardless of syntactic contexts. If the host NP c-commands the associated FQ, they must share the same Case value ($uT$) with T and $v$, as in (7). If the NP and FQ have a different T-value, one of them will behave as an intervener for T-link between T and $v$ – which causes ungrammaticality, as in (3a). If the host NP receives an accusative Case in ECM contexts, the FQ must receive the same accusative Case due to the T-link established in underlying structure, as in (3b).

IPC. In contrast, Case sharing in IPCs is not obligatory. If the possessor forms a constituent with the possessee, they do not have to share the same Case ($uT$) value, as in (8). If the possessor raises to a higher clause in ECM contexts before it shares a T-feature with the possessee, it will receive a new Case value associated with the matrix verbal head V and AgrO. The possessee may stay in-situ and receive the nominative Case between T and $v$ in the lower clause, as in (4a). The grammaticality of (4b) is expected if the possessor John may share the T-feature with father before it raises to the higher clause.
(1) **Haksayng-i**  **sey-myeng-i**  Mary-lul  mannassta
Student-Nom  3-Cl-Nom  Mary-Acc  met
‘Three students met Mary’ (Floating quantifier construction)

(2) **John-i**  **apeci-ka**  caknyun-ey  toycik-ul  hasiessta
John-Nom  father-Nom  last.year-at  retire-Acc  did
‘John’s father retired last year’ (Inalienable Possession Construction)

(3) a. *?John-un  caki-pan **haksayng-ul**  **sey-myeng-i**  pwuca-lako  mitnunta
   John-Top  self  class student-Acc  be.rich-C  believe
   ‘John believes that three students in his class are rich.’
b. ?John-un  caki-pan **haksayng-ul**  **sey-myeng-ul**  pwuca-lako  mitnunta

(4) a. Mary-nun **John-ul**  **apeci-ka**  pwuca-lako  mitnunta
   Mary-Top  John-Acc  father-Nom  be.rich-C  believe
   ‘Mary believes that John’s father is rich’
b. ? Mary-nun  **John-ul**  **apeci-lul**  pwuca-lako  mitnunta

(5) Nominative Case Sharing
(6) Accusative Case Sharing

(7) Obligatory Case Sharing: FQC
(8) Optional Case Sharing: IPC

References
Clausal Pied-Piping and Cyclicity of Ellipsis: Evidence from Truncated Wh-Questions in Okinawan

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In the Minimalist Program, it is assumed that all syntactic operations apply cyclically, in the phase-by-phase fashion. The question that I would like to address in this paper is whether ellipsis also applies cyclically. In the sluicing with long wh-movement as in (1), for instance, there are two possibilities in derivation as shown in (2a) and (2b). In (2a), the IP deletion applies non-cyclically, across-the-board after successive wh-movement (copy). In (2b), on the other hand, the wh-phrase is copied to the lowest [Spec, CP] and then the lowest IP is deleted. After the embedded IP deletion, the wh-phrase is copied to the higher [Spec, CP], followed by the deletion of the intermediate IP he claimed. This paper argues that the patterns of truncated wh-questions in Okinawan (a dialect of Japanese, spoken in the Ryukyu islands) is best analyzed by assuming the cyclic application of IP-deletion with clausal pied-piping, which gives a piece of empirical evidence for the claim that ellipsis applies cyclically.

The sequence of sentences used in this paper is given in (3), which is very similar to sluicing cases, but the second sentence is a matrix wh-question, not an indirect wh-question (cf. Inamine 2006). The second sentence in (3) is a non-truncated wh-question, and it is truncated in three ways, as given in (4a-c). In (4a), the whole embedded clause is deleted except the wh-phrase and the embedded [-wh] complementizer ndi. In (4b), only the matrix verb ichoo ‘say’ is deleted. (4c) is a mixed case of (4a) and (4b). It should be noticed that apparently (4a-c) seem to be derived by V0-deletion, but in fact this is not the case. Okinawan has no V0-deletion as shown in (5), where the matrix verb in the second clause is deleted. I would like instead to claim that the patterns given in (4a-c) are derived by usual sluicing (= IP deletion) and clausal pied-piping (cf. Arregi 2003).

In (4a) the wh-phrase is copied to the embedded [Spec, CP] headed by ndi. Here I assume that there is a feature to be checked both in the wh-phrase and the complementizer, although the latter is [-wh]. After copying of the wh-phrase, the IP is deleted. Then we obtain the sequence of (4a). This derivation is basically the same as the analysis of Japanese sluicing proposed in Takahashi (1994). In (4b), the wh-phrase is copied to the embedded [Spec, CP] and either the copy or the original is pronounced. And then the wh-phrase pied-pipes the whole CP headed by ndi to the matrix [Spec, CP] headed by ga. After the pied-piping, the matrix IP is deleted, resulting in (4b). In (4c), first the wh-phrase is copied to the embedded [Spec, CP] and then the embedded IP is deleted. After the IP-deletion, the embedded CP is copied to the matrix [Spec, CP] by pied-piping, followed by the matrix IP deletion, as shown in (6). What is important is that in (4c) IP deletion applies two cyclically.

If the analysis presented here is correct, it will provide empirical evidence for the claim that ellipsis applies cyclically, which also implies that at least IP deletion (= sluicing) is an operation in narrow syntax. Of course it is also possible to argue that (6) is derived as follows. First the wh-phrase is copied to the embedded [Spec, CP], and then that CP is pied-piped to the matrix [Spec, CP]. After the clausal pied-piping, IP-deletion applies to the embedded and matrix IPs simultaneously. In this case, IP-deletion applies just once, but very crucial is that the operation deletes the minimal IPs which do not dominate another IP. Thus, the application of IP-deletion beyond the phase-boundary as in (2a) does not have to be assumed in the theory of grammar.
(1) John claimed Mary went somewhere, but I don’t know where.
(2) a. non-cyclic application of sluicing
   (iii) deletion
   I don’t know where he claimed [where Mary went where]]
   (ii) copy
   (i) copy

   b. cyclic application of sluicing
   (iv) deletion
   (ii) deletion
   I don’t know where he claimed [where Mary went where]]
   (iii) copy
   (i) copy

(3) Majiruu-ga nuu-gana mucchi-chuun di ichooru huunji yan doo.
   -Nom what-∃ bring-go COMP say seem Prt Prt
   Yashiga pro [pro nuu mucchi-ichuun di] ichoo ga?
   but what bring-go COMP say Q
   ‘I hear Majiruu is saying that he will bring something. But what is he saying that he will bring?’

(4) a. [nuu mucchi ichuu ndi] ichoo ga?
   what bring-go COMP say Q

b. [nuu mucchi-ichuu ndi] ichoo ga?
   what bring-go COMP say Q

c. [nuu mucchi ichuu ndi] ichoo ga?
   what bring-go COMP say Q

(5) Taruu-ya achaa ami-ga huyin ndi umutoon doo.
   -Top tomorrow rain-Nom fall COMP think Prt
   *Jiraa-n achaa ami-ga huyin ndi umutoon doo
   -also tomorrow rain-Nom fall COMP think Prt
   ‘Taruu thinks it will rain tomorrow. Jiraa thinks it will rain tomorrow, too.’

(6) References
Inamine, Seiji (2006) Okinawago ni okeru wh-gimonbunkanyaku “Wh-Question Truncation in
Multiple wh-construction and its interpretation in Chinese

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**Background:** The multiple wh-construction in Chinese, such as (1), is ambiguous between single-pair (SP) and pair-list (PL) readings, while in English and other languages with overt wh-movement, the multiple wh-sentences are in general only accessible in a PL reading (Boskovic 2001). Interestingly, it is observed that Chinese PL is not allowed when both wh-phrases are inside a movement island (Hagstrom 1998), suggesting that PL involves (covert) movement in wh-in situ languages like Chinese, as in (2):

1. Shei mai-le sheme who bought what  
   'who bought what?' (SP; PL)

2. yinwei shei mai-le sheme, Zhangsan hen bu gaoxing.  
   because who bought what Zhangsan very not happy  
   'Zhangsan is unhappy because who bought what.' (SP; *PL)

To account for this fact, Hagstrom (1998) proposes that PL results from Q-raising from the lower wh-phrase, and SP from both wh-phrases staying in situ (being bound by Q). Therefore, (3a) is the canonical structure of PL and (3b) the structure of SP:

3. a. [C [WH₁...V...WH₂+Q]] (PL)  
   b. [C[Q [WH₁...V...WH₂]]] (SP)

In contrast to Hagstrom's approach, Aoun & Li (2003) and Li (2003) do not employ (direct) wh-movement. They propose that both wh-phrases are licensed by the Question operator (Qu), and the scope of Qu induces PL in Chinese multiple Wh-questions.

**Problem:** If we take into consideration Chinese examples like (4) (from Aoun & Li 2003), Hagstrom's theory is too weak in that it fails to explain why (4) can still have PL. Note that in (4), the second WH appears in an island (therefore Q-raising is impossible):

4. Shei [island yinwei wo gen shei shuohua] hen gaoxing?  
   who because I with whom speak very happy  
   'Who is glad because I talked with whom?' (SP; PL)

On the other hand, Aoun & Li (2003)'s account is considered too strong in that it incorrectly predicts that sentences like (2) would have a PL interpretation (since Qu-licensing is not sensitive to islands). Another problem comes from the distributive marker and the availability of PL. When a distributive marker like ge 'each' is used in the sentence, PL is always available, and the island sensitivity of PL disappears in this case, as in (5). This is unexpected under both accounts:

5. Shei ge mai-le sheme rang Zhangsan bu gaoxing  
   who each bought what makes Zhangsan not happy  
   '(The fact that) who each bought what makes Zhangsan very unhappy.' (PL okay)

**Proposal:** I pursue the Target Landing Site Theory (TLST) developed in Beghelli (1997) and Stowell & Beghelli (1997) with slight modifications to account for PL in Chinese multiple wh-construction (see 6 for the simplified structure; notice that different types of QPs are checked in different hierarchical positions within TLST). In Beghelli (1997), PL is reduced to a subcase of distributivity. He further proposes two types of distributivity in natural languages: Strong Distributivity vs Pseudo-Distributivity. In Strong Distributivity, the distributive marker (each in English) ensures that the PL interpretation is always available. This successfully accounts for the island insensitivity of (5). When ge 'each' appears, it heads the Distributive Phrase as a distributive operator and binds the event argument (hence the distributivity of the associated arguments). When an overt distributive marker is not present in the sentence, however, PL may still be achieved through Pseudo-Distributivity under two conditions: (i) the higher QP/WH raises to SpecRefP (Reference Phrase), and (ii) the distributive relation respects the argument hierarchy: Subject > Indirect Object > Direct Object. Since RefP provides an existential closure, I propose that when interpreted as PL, the higher wh-phrase (due to minimality) raises to SpecRefP in order to be existentially closed. Due to this covert movement, PL is island sensitive. The proposal builds...
upon the idea that Chinese wh-phrases are not quantificational, but function more like variables (Cheng 1991; Li 1993; Tsai 1994). Therefore, the two available readings (SP and PL) reflect two possible ways for the wh-variable to receive its existential closure: in SP, the (existential) choice function unselectively binds the variable in situ; therefore, the SP is not island-sensitive. PL is attained through the wh-variable (covertly) moving to a higher functional projection (RefP) and the wh-variable being existentially closed through the spec-head checking of scope under the TLST. (6) illustrates each potential scope checking site:

(6) The core structure of the Target Landing Sites Theory

\[
\text{RefP} \\
\text{GQP} \quad \text{Ref(∃)} \quad \text{CP} \\
\text{(indirect NPs)} \\
\text{CF} \quad \text{C} \quad \text{DistP} \\
\text{DQP} \quad \text{Dist(∀)} \\
\text{(every/mei N) (Chinese ge)}
\]

**Evidence:** Under the proposed analysis, it is the (covert) movement of the higher WH (for the WH outside the island) that induces PL. Interestingly, if the higher WH is D-linked (wh-in situ), the only possible interpretation is SP, but not PL. In (7), which professor is D-linked (hence no superiority effect):

(7) Which student, does which professor, prefer t,? (SP; *PL)

The same observation seems to hold cross linguistically (Pesetsky 2000; Boskovic 2001; Grebenyova 2004). The second piece of evidence comes from the use of dou 'every' in Chinese. Since the combination of WH-dou normally has the effect of universal quantification (see 8a), the condition for PL should be totally satisfied. However, it is unexpected that dou would actually block the PL in Chinese, as in (8b):

(8) a. Shei dou xihuan chi hanbao.
   who every like eat hamburger
   'Everyone likes to eat hamburger,'

b. Shei dou mai sheme?
   who every buy what
   i. *'What did everyone buy?'
   (PL not available)
   ii. 'What did which person buy in every occasion?'
   (SP; PL)
   Ans: 'John always buys banana.'

As (8b) shows, when dou quantifies over the higher WH, reading (i) is ungrammatical. On the other hand, if dou quantifies over the event argument, as in reading (ii), both SP and PL become available. The blocking effect of dou (as well as other quantificational elements) therefore specifically indicates that the higher WH undergoes covert movement under PL.

**Selected References:**


A Metrical Analysis of Siane Tone
Patrick Liu
Harvard University

The surface tone patterns of Siane, a Papuan language, are not easily derived in a standard autosegmental tone mapping and spreading account. The limits of directional tone mapping have been noticed before (Zoll 2003), but the details of metrical structure assignment have not been a crucial element. In this paper I show that a more unified account of tone patterns in Siane requires interaction between metrical structure and tone (Sietsema 1989; Purnell 1997). Previous autosegmental analyses which have ignored metrical prominence and constituency (James 1994) can offer only ad hoc solutions.

Most of the surface tone patterns in Siane are consistent with left-to-right (L-to-R) tone mapping and spreading. The data in (1) show the last tone in a HL or LH melody spreading rightwards, so that the last two syllables share the same tone. However, other tone patterns are more problematic. For example, when the melody HLH appears on two-syllable words, two of the tones must map to a single syllable to form a contour tone. L-to-R mapping predicts that the tone pattern will always be H.LH, with a rising tone on the final syllable. While this pattern does occur, as shown in (2a), a more frequent tone pattern is HLH, with a falling tone on the penult (2b). To account for this, James proposes a Low Tone Association Adjustment (LTA) rule. This rule re-associates a L tone to a preceding vowel when: (a) it is the first tone in a sequence of multiple tones attached to one syllable, and (b) when the number of tones on the syllable exceeds the number of vowels. This is illustrated in (4), where the contour tone in the final syllable undergoes LTA because the syllable contains only a single vowel, not a diphthong. (3) illustrates another problem for tone mapping. The ergative suffix -kafo is underlyingly toneless and derives its tones through L-to-R tone spreading, as shown in (3a) and (b). However, (3c) shows a HL contour surfacing as a H tone on the first two syllables and a L tone on the rest. This happens only to words with HL tone melodies, and only when the word is a suffixed form of three or more syllables (contrast (3c) with (1a)). Neither L-to-R nor R-to-L mapping and spreading can account for this pattern. James proposes a rule of HL Sequence Tone Adjustment (HLTA), which applies when a word-initial H tone is followed by a L tone linked to three or more syllables. The rule delinks the L tone from the first syllable in the sequence of three (or more), and spreads the H tone rightwards to the resulting toneless syllable, as illustrated in (5). While these rules do produce the desired tone patterns, they only work in extremely restricted environments, and the proposed structural changes are quite arbitrary, with the result that they are little more than detailed descriptions of the surface tone patterns.

An analysis using tone rules which make reference to metrical structure has far fewer arbitrary elements. In (6) I show how my proposed rules of metrical structure assignment (following Halle and Idsardi 1995) apply to three Siane words. Many of these rules, such as Iterative Constituent Construction (ICC) and Edge-Marking, are also needed to account for stress in other languages. The rules for Siane automatically assign greatest prominence to either the first or third syllable in the word, depending on the number of syllables. In addition, diphthongs are considered heavy, and they automatically receive prominence. The resulting metrical structures give us a simple way to account for the tone patterns which traditional tone mapping cannot explain. The varying distribution of contour tones in (2) is due to a Contour Tone Restriction rule, which delinks the first tone in a contour on a non-prominent syllable and then re-associates the tone to the left (see (7)). Since diphthongs receive prominence, the Contour Tone Restriction does not apply to díyǎn (2a). The tone pattern in (3c) results from a rule which shifts a L tone rightwards onto the most prominent syllable in the word (ordered after tone mapping but before spreading), shown in (8).

Whether implemented in a derivational account of phonology (i.e., rules) or a constraint-based one (OT), an analysis of Siane requires that metrical structure must be taken into account in tone mapping, suggesting that tone and metrical structure are inextricably linked.
Data / Examples:
(1) a. HL melody b. LH melody (2) a. diyāu 'bright blue' b. kēfā 'meat'
máfūnā ‘owl’ kīlīfū ‘trap’
(3) a. kūlā ‘dog’ b. màfó ‘taro’ c. máfūnā ‘owl’
kūlákáfó ‘dog(erg.)’ màfókáfó ‘taro(erg.)’ máfūnākàfò ‘owl(erg.)’

(4) Tone Mapping & Spreading

kefa → LTA
| \ | \ | |
H L H

(5) Tone Mapping & Spreading

HLTA

| \ | | | |
H L H

References:
Perceptually-Driven Allomorphy

Ingvar Löfstedt, UCLA Department of Linguistics

The Swedish non-neuter singular definite article shows a peculiar pattern of allomorphy. It can surface as [n] or [en], the latter being the result of epenthesis. Postvocalic and postobstruent allomorphs are consistent with standard phonotactic patterns. Hiatus is avoided after vowels, so no epenthesis takes place. Coda-internal sonority rises are avoided after obstruents, so epenthesis takes place. However, allomorphy after nasal-final stems is not reducible to phonotactics. Swedish licenses word-final nasal-nasal clusters ([sømn] ‘sleep’) but these clusters are split if the [n] is the definite article ([’søm: + en] ‘the seam’). As a solution to this puzzle, I propose that allomorphy is driven by perceptual salience, not mere phonotactics.

Three explanatory mechanisms for epenthesis after nasal-final stems are inadequate: the pattern is not driven by minimality (Raffelsiefen 2002), sonority, or avoidance of potential neutralization. First, this is not a minimality effect, since the epenthesis occurs to trochaic stems as well as to monosyllabic stems. Also, the genitive, neuter, supine, and participle all show that an affixed form can be monosyllabic. Second, it is not a sonority contour effect: the neuter, supine, and participle all license sonority plateaus. Third, it is not driven by potential neutralization (Bakovic 2005). A sequence of coda nasals fail to neutralize in Swedish.

Crosswhite (1999) notes systematic avoidance of intraparadigmatic segmental identity. The Swedish case is more subtle: it is the avoidance of intraparadigmatic perceptual similarity. I posit a constraint *NONDIST MORPH militating against nondistinct tautoparadigmatic morphemes. In sufficient noise, all morphemes are to some extent nondistinct, so a given morphemic exponence m in a given context K inevitably violates *NONDIST MORPH (m/K).

The ranking of that constraint *NONDIST MORPH (m/K) depends on the confusability of m with other tautoparadigmatic morphemic exponences. Take the definite morpheme’s exponence [n] and the nondefinite morpheme’s exponence ∅. Exponences [n] and ∅ are not highly confusable in context V_. They are highly confusable in context m_. Following Steriade (2001), P-map projects the relative rankings *NONDIST MORPH (n/m_) >> *NONDIST MORPH (n/V_). If the anti-epenthesis constraint DEP-V is ranked between these two, we license postnasal epenthesis, and we block postvocalic epenthesis.

*NONDIST MORPH only applies to morphemes, not non-morphemic phonemes. The final /n/ in the stem [sømn] ‘sleep’ fails to trigger epenthesis, since the relevant phonotactic markedness constraint (call it *n/m_#) is ranked lower than DEP-V, unlike *NONDIST MORPH (n/m_), ranked higher than DEP-V.

The pattern of affixation after lateral-final stems shows interactions between *NONDIST MORPH and prosodic constraints. If a lateral-final stem ends in a stressed syllable, epenthesis occurs before the suffix. If a lateral-final stem ends in an unstressed syllable, it does not occur. The default foot in Swedish is trochaic (Riad 1992). Assuming that dactyls involve an unparsed syllable, incurring a violation of PARSE-σ, the pattern can be captured by means of the ranking PARSE-σ >> *NONDIST MORPH (n/L_0) >> DEP-V.
<table>
<thead>
<tr>
<th>Examples</th>
<th>stem</th>
<th>definite form</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-vocalic</td>
<td>[byː]</td>
<td>[byːn]</td>
<td>‘village’</td>
</tr>
<tr>
<td>Post-obstruent</td>
<td>[sɑːk]</td>
<td>['sɑːken]</td>
<td>‘thing’</td>
</tr>
<tr>
<td>Post-nasal</td>
<td>[søm]</td>
<td>['sømən]</td>
<td>‘seam’</td>
</tr>
<tr>
<td></td>
<td>['pilgrim]</td>
<td>['pilgrimən]</td>
<td>‘pilgrim’</td>
</tr>
<tr>
<td></td>
<td>['seŋ]</td>
<td>['seŋən]</td>
<td>‘bed’</td>
</tr>
<tr>
<td></td>
<td>['vɛlɪŋ]</td>
<td>['vɛlɪŋən]</td>
<td>‘porridge’</td>
</tr>
<tr>
<td>Post-lateral</td>
<td>[ɑːl]</td>
<td>['ɑːlen]</td>
<td>‘alder’</td>
</tr>
<tr>
<td></td>
<td>['konsəl]</td>
<td>['konsəln]</td>
<td>‘consul’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monosyllabic bimorphs</th>
<th>[viːs+t]</th>
<th>wise, n.</th>
<th>[reːv+s]</th>
<th>fox, gen</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[dʊm+d]</td>
<td>‘judge, part.’</td>
<td>[dʊm+t]</td>
<td>‘judge, sup.’</td>
</tr>
<tr>
<td>Coda sonority plateaus</td>
<td>[ræk+t]</td>
<td>‘straight, n.’</td>
<td>[ræɡ+d]</td>
<td>‘judge, part.’</td>
</tr>
<tr>
<td></td>
<td>[leɪk+t]</td>
<td>‘judge, sup.’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Non-neutralized sequences | [sømn] | ‘sleep’ | [sɛn] | ‘legend’ |

### Notes

| No epenthesis after V | >a byː+en | b byː+en | | |
| Epenthesis between m[n] | a søm+n | *! | | *
| No epenthesis between mn] | > b sømːen | | * | *
| Epenth after l posttonically | a ɑːl+n | *! | | *
| Else, no epenth after l | > a reɡel+n | | * | *

### References


Sequential markedness constraints and non-iterativity
Shakuntala Mahanta
Utrecht University

In the literature on iterative versus non-iterative processes, there is hardly any consensus on the fact that both the processes may be the result of similar motivations. This paper addresses the relevance of sequential markedness constraints in the analysis of iterative and non-iterative processes and shows that a simple modification of the constraint driving an iterative process will result in a non-iterative process. While it is clear from the previous literature that sequential markedness of the type *[-F][+F], can handle an iterative process like vowel harmony adequately (Hansson 2002, Pulleyblank 2002), this paper will concentrate on a typology of both iterative and non-iterative vowel harmony processes in three related languages. Furthermore, one of the aims of this paper is also to show how sequential markedness can also correctly predict semi-iterativity as a result of re-ranking of higher ranked faithfulness constraints.

The languages under consideration are Assamese, Bengali and Tripura Bengali which belong to the Indo-European group of languages and are spoken in Eastern India. Assamese presents itself as a case of iterative regressive [+ATR] vowel harmony, where *[-ATR][+ATR] is the harmony driving constraint (ex. 3). Assamese has an inventory of eight vowels /i, u, ə, e, ɔ, e, o, ɑ/. /i/ and /u/ trigger [+ATR] harmony (ex. 1) on the preceding [-ATR] vowels /ɛ, ɔ, ʊ/ and /ɑ/ is opaque to harmony in the regular phonology. In Bengali and Tripura Bengali on the other hand, harmony is non-iterative and regressive (ex. 2). Here too, /i/ and /u/ trigger [+ATR] harmony on the preceding [-ATR] vowels. The harmony driving constraint is *[-ATR][+ATR +hi] (ex.4), where the added specification of [hi] restricts harmony to only those cases where the harmony triggering vowel is both [+ATR] and [hi]. This added specification results in the lack of context for further iterations of harmony. However, for this constraint to consistently produce the right results, the ranking IDENT [hi] >> *[-ATR][+ATR +hi] must universally hold true. Otherwise, ‘height-dependent’ agreement makes another typological prediction - that the result of [ATR] harmony will produce vowel lowering in order to avoid agreement violations. The fact that this is not so, is demonstrated in Bengali itself, where, in verbal roots, mid vowels undergo a chain-shift resulting in /ɛ~/i/ and /ɔ~/u/ alternations. In Standard Bengali there is no way of testing whether this will result in semi-iterativity, as verbal roots are always monosyllabic and therefore consistently produce a non-iterative pattern.

In this regard, Tripura Bengali provides crucial evidence in support of the semi-iterative pattern, where the raised vowel triggers harmony in yet another preceding vowel. It is interesting to note that in all other circumstances, Tripura Bengali presents itself as a case of non-iterative harmony. It is only in those instances of the verbal paradigm where there is an /ɛ~/i/ alternation, does semi-iterativity present itself.

In a broader perspective, this paper also makes a strong claim that iterative and non-iterative processes (especially in vocalic assimilation) are comparable. Therefore, the paper shows that iterative, non-iterative and semi-iterative harmony, at least in the group of languages taken into consideration here, is the result of a motivation for contextual neutralisation (Hansson 2002) and the only difference lies in the additional factors which constrain the non-iterative processes.
(1) Iterative Assamese Harmony

<table>
<thead>
<tr>
<th>Assamese</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>boxɔt</td>
<td>boxoti</td>
</tr>
<tr>
<td>ɔxɔt</td>
<td>ɔxoti</td>
</tr>
<tr>
<td>pod</td>
<td>podobi</td>
</tr>
<tr>
<td>kɔʰtɔk</td>
<td>kotɔki</td>
</tr>
</tbody>
</table>

(2) Non-iterative harmony in Bengali and Tripura Bengali

<table>
<thead>
<tr>
<th>Bengali</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>boʃɔt</td>
<td>boʃoti</td>
</tr>
<tr>
<td>ɔʃɔt</td>
<td>ɔʃoti</td>
</tr>
<tr>
<td>pod</td>
<td>podobi</td>
</tr>
<tr>
<td>kotok</td>
<td>kotoki</td>
</tr>
</tbody>
</table>

(3) Assamese iterative harmony

<table>
<thead>
<tr>
<th>Assamese</th>
<th>Meaning</th>
<th><em>[+-ATR]</em></th>
<th>ID[+ATR]</th>
<th>ID[-ATR]</th>
</tr>
</thead>
<tbody>
<tr>
<td>pod/+/obi</td>
<td>!</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>podobi</td>
<td>*!</td>
<td>!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>podobi</td>
<td>*!</td>
<td>*</td>
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<td></td>
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</tbody>
</table>

(4) Bengali non-iterativity

<table>
<thead>
<tr>
<th>Bengali</th>
<th>Meaning</th>
<th><em>[+-ATR]</em></th>
<th>ID[+ATR]</th>
<th>ID[-ATR]</th>
</tr>
</thead>
<tbody>
<tr>
<td>pod/+/obi</td>
<td>*[^hi +ATR]</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>podobi</td>
<td>*</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>podobi</td>
<td>*!</td>
<td>**!</td>
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References


**Applicatives TO, FROM, and AT: on Dative and Locative Possessors in Russian**

**The Facts.** ‘External’ possessors such as [1] (Borer&Grodzinsky1986, Landau1999) and [2] (Pylkkanen2002) are common in languages (Gueron1985, Shibatani1994, Ura 1996, Lee-Schoenfeld2006). Russia has two types of ‘external’ possessors: Dative(PD)[3] and Locative(PLoc)[4], used with a locative P ‘u’= ‘from/at’. PDs and PLocs can be used interchangeably in [3] and [4]. But, only PLocs are allowed with unaccusatives[5a]. Conversely, PLocs cannot appear with unergatives[6b] and with inalienable possession constructions[5b].

Types of ‘external’ possessors: Dative (Control Locative) (much attention in the literature. Furthermore, sentences in [4&6b] have a reading, Z had X do Y, which I call ‘Control Locative’ (ControlLoc)(cfRitter&Rosen1997), and which is unavailable to PDs. For example, ControlLoc in[4a], unlike PD in[3a] is suitable if Dima has a bad appetite, yet we get him to eat all the soup.

**The Questions.** We ask: (1)Why are Dative and Locative possessors used interchangeably in[3,4], but not in [5,6]? (2) How do Russian PDs, PLocs, and ControlLocs fit into a typology of applicatives developed in Pylkkanen (2002) for analyzing ‘external’ possessor constructions such as [1]&[2]?

**Proposal.** Starting with PDs[3], I argue that they are arguments of a high Recipient applicative head HighApprTO (a la Pylkkanen2002) that relates an individual to an event, i.e. adds a benefactive / malefactive argument (cfMcIntyre2003, Hole2005). It also licenses dative case on it. The possessive interpretation arises due to pragmatics: one usually benefits/suffers from having one’s own possessions affected. Importantly, internal possessors such as ‘V anja’s’ are always compatible with PDs[cf3b], in line with the applicative analysis. That Russian PDs are high applicatives is supported by the tests in Pylkkanen 2002: they are ok with unergatives [cf6a], statives[7a], and depictives[7b]. I further argue that HighApprTO selects a vP, and hence, is impossible with unaccusatives[5a]. It does not require volitional agents that are introduced by Voice (Kraterz 1996) and can appear with a non-agentive causative construction[8], shown in[9] that only involves a v-caus (Markman2004 building on Pylkkanen2002). [10] illustrates PDs in agential transitives such as [3a].

Turning to PLocs[cf4,5a], I argue building on Pylkkanen 2002’s analysis of PDs in Hebrew (cfLandau1999) that Russian PLocs involve a low Source applicative (LowApplFROM) that relates two individuals. PLocs require that the possessed DP be in the possession of the affected individual and then become ‘lost’ (Pylkkanen 2002). Hence, PLocs appear with transitives[cf4] and unaccusatives [5a] shown in [11], but not
with unergatives [6b], which lack an internal argument, nor with inalienable possession constructions[5b] which do not involve a ‘loss’. Thus, though LowApplFROM arguments that suffer a ‘loss’ are close in meaning to the HighApplTO ‘maleficiaries’, they have different syntax and are not interchangeable in all constructions [cf 5 and 6]. Furthermore, being high and low applicatives PLocs and PDs can be combined [12].

Importantly, unlike HighApplTO, LowApplFROM lacks case, requiring the case-licensing P ‘u’ in Russian. This fact also indicates that a raising analysis a la (Landau1999 for Hebrew[1], also Lee-Schoenfeld2006), on which the possessor raises from spec of the possessed DP to spec VP for case, won’t work for PLocs: if not for case, there is no reason for the possessor to raise(ibid). The raising analysis also won’t work for Russian PDs: if the possessor moves to spec V P for dative case (Landau1999:9), PDs should appear with unaccusatives, but they don’t [cf 5a, 1b]. Moreover, a comparison of Hebrew[1] and Finnish[2] with Russian PDs and PLocs suggests that [1] and [2] correspond to PLocs in Russian. That is, [1] &[2] involve LowApplFROM (Pylkkanen 2002), which licenses dative and ablative cases respectively and appears with transitives and unaccusatives, but not with unergatives(Landau1999; Pylkkanen2001). Finally, turning to ControlLocs [4,6b,13], I propose that the control reading arises due to a high applicative head ‘AT’, which indicates that the argument ‘possesses’/controls a situation X(cfPylkkanen 2002:56). HighApplAT, which also lacks case in Russian, selects a VoiceP[14] and needs an agent. It cannot appear with unaccusatives or naturally caused events[15].

ControlLocs, PDs, and PLocs thus represent AT, TO, and FROM applicatives, which if combined, yield[16].

[9] Mne ApplP TO ApplP TO
<table>
<thead>
<tr>
<th>I-dat</th>
<th>v-causP</th>
<th>v-causP</th>
</tr>
</thead>
<tbody>
<tr>
<td>rasbilo</td>
<td>perf-break</td>
<td>NP(okno)</td>
</tr>
</tbody>
</table>

[10] Dima Voi S'jel Voi' ApplP TO VoiP
| NP | we-dat | NP | NP(soup) |

He I-dat perf-dirtied P- Dima-gen all clothes

[12] Dima u menja sidel tixo/ pojel
Dima P I-gen sat quietly/perf-ate

He dirtied up all Dima’s clothes on me


[14] U nas zashlo solntse/ razbilo okno vetrom
We I-gen set sun /broke3rdNeut window wind-inst

[15] ControlLoc: We had the sun set / the window broken by the wind

[16] U menja Dima s’jel tebe u Mishy ves’ sup
I had Dima eat up all of Misha’s soup on you

‘Pure’ Possessors: I have a book

[17] U menja /(*mne) est’ kniga
I P I-gen / I-dat ) be book

‘Pure’ Possessors: I have a book


Conclusion. The proposal accounts for the distribution of PDs, PLocs, and ControlLocs by treating them as TO, FROM, and AT applicatives and places them into a typology of ‘external’ possessors found in Hebrew and Finnish, among other languages. It further unifies ControlLocs with the ‘pure’ possessors, by treating them as high and low ‘AT’ applicatives respectively.
Verbal morphology: Return of the affix hopping approach
Akira Omaki, University of Maryland

**Aim:** In the last 50 years three different approaches to lexicon and syntax have been proposed to explain English verbal morphology (1) and the VP ellipsis (VPE) data (2): the affix hopping approach (AHA) [1], the lexicalist approach [2-5], and the hybrid approach (HA) [6]. The HA most successfully accounts for (1) and (2) but creates new empirical and conceptual problems [5]. I propose a feature-based minimalist AHA with an additional assumption that head movement (HM) does not leave a trace. It is argued that this analysis solves the problems with the HA and supports a non-lexicalist approach to morphosyntax [7,8].

**HA:** Lasnik’s HA [6] has two traits: (a) main Vs are bare in the lexicon and carry no T feature (hence no overt V raising (1b)), but auxiliary Vs (have/be) are inflected in the lexicon and carry T features (and thus undergo overt raising (1ef)); (b) T can be affixal or featural. Affixal T undergoes PF-merger with main V if they are adjacent at PF (1ac), but it is pronounced do when stranded (1d). Featural T needs to check its feature with have/be raising (1ef). (a) also explains (2), assuming a form identity condition (FIC) (3) on VPE [6,9]: (2a) is acceptable since the main Vs (and hence the VPs) have the same form (sleep) prior to PF-merger (4a), whereas (2bc) is ruled out since the two auxiliaries bear different forms (4bc), violating the FIC. In the HA, –ing/en is introduced together with have/be [1] and also PF-merges with V (5).

**Problems:** The HA faces three empirical and two conceptual problems {E1-3} {C1,2}. {E1} Lasnik’s account of (2) relies on the assumption that have/be raising leaves a copy behind (4). This incorrectly predicts (6) to be ruled out, as the traces of have/be have different forms and violate the FIC. {E2} It offers no account for the asymmetry in (7): stranding of en is acceptable (7b), but stranding of ing is not (7a). {E3} The presence of bare forms have/be (8) indicates that it can be introduced without features, just like main V. This incorrectly predicts do-support is possible in (9). {C1} It is stipulative that V/T features are absent in some V/Ts [5]. {C2} It raises a learnability problem: how do children learn which verbs should be stored in bare or inflected form, when inflected forms can be derived lexically or via PF-merger? 

**Feature-based AHA:** I propose a minimalist AHA: First, assuming that strong features can be carried by an attractor or attractee [10], I propose that main V has a weak T feature (hence no overt V raising (1b)) and have/be has a strong T feature (and thus overtly raises (1ef)), while they are all bare in the lexicon. This solves the learnability problem {C2} as long as it is encoded in the UG that all Vs are bare in the lexicon [8]. Second, I propose that T is both affixal and featural, addressing {C1}: it has a phonological property of (i) being affixal under PF-adjacency to a main V (1ac) or a head-adjunction of V (1ef), and (ii) being pronounced do otherwise (1d), whereas it also has formal features required for feature checking with V. This explains why there is no do-support with bare have/be {E3}: it has strong T features and overtly raises to T, so T is not stranded. When they are selected by M(odals), however, I assume that all Vs have weak M features instead of T features. This explains the lack of overt V-raising in the presence of M (8). The feature-based approach extends to ing and en: I propose that ing has a strong V feature and en has a weak V feature, and that they are both affixal and receive null pronunciation when stranded. This explains the asymmetry in (7) {E2}: a licit VPE that meets the FIC would require sleep to stay in VP, but the strong feature of ing is not checked and hence the derivation crashes (10a). The derivation converges in (10b), since the V feature of en can be checked covertly. Finally, I assume that HM leaves no copy behind. This explains (2) and (6) {E1}: (2) is ruled out since the V in the antecedent VP is left empty by overt V-raising and thus not identical in form to that of the elided VP that remains in situ (11). (6) is ruled in since both auxiliaries overtly raise and leave V empty, and the two VPs remain identical in form (12).

**Consequences:** I argued that the minimalist AHA solves the problems with the previous accounts. As a consequence, this corroborates the view that complex morphological forms can be derived from syntactic operations [7,8]. Moreover, the proposal that HM leaves no copy behind suggests that the 0-assignment configuration need not be represented at LF, lending support to derivational 0-role assignment [11,12].
Examples:
(1) a. John left.
   b. *John left not.
   c. *John T not left.
   d. John did not leave.
   e. John has not left. (*John not has left)
   f. John is not leaving. (*John not is leaving)
(2) a. OKJohn slept, and Mary will sleep too
   (OKJohn slept, and Mary will sleep too)
   b. *John was here, and Mary will be here too
   (OKJohn was here, and Mary will be here too)
   c. *John has left, but Mary shouldn’t have left
   (OKJohn has left, but Mary shouldn’t have left)
(3) Form identity condition (FIC) on VPE: The elided VP and its antecedent must be identical in form.
(4) a. John T [ VP sleep], and Mary will [ VP sleep] too
   b. *John [ TP was, [ VP was] here], and Mary will [ VP be here] too
   c. *John [ TP has, [ VP has en leave]], and Mary shouldn’t [ VP have en leave]
(5) a. Mary was ing [ VP sleep] (⇒ “Mary was sleeping” after PF-merger of ing to sleep)
   b. Mary has en [ VP sleep] (⇒ “Mary has slept” after PF-merger of en to sleep)
(6) a. OKJohn [ TP was, [ VP was here], and Bill and Mary [TP were2 [ VP were2 here]], too
   b. OKJohn [ TP has, [ VP has en leave], and Bill and Mary [TP have2 [ VP have2 en leave]], too.
(7) a. *John slept, and Mary was (ing) [ VP sleep] too.
   b. John slept, and Mary has (en) [ VP sleep] too.
(8) a. It might not be raining now.
   b. It might not have rained.
(9) *It does not be raining.
(10) a. *John T [ VP sleep], and Mary was [ IngP (ing) [ VP sleep]] too. (cf. (6a))
    b. John T [ VP sleep], and Mary has [ EnP (en) [ VP sleep]] too. (cf. (6b))
(11) a. *John was [ VP ____ here], and Mary will [ VP be here] too (cf. (2a))
    b. *John has [ VP ____ en leave], and Mary shouldn’t [ VP have en leave] (cf. (2b))
(12) a. John was1 [ VP ____ here], and Bill and Mary were2 [ VP ____ here] too (cf. (5a))
    b. John has [ VP ____ en leave], and Bill and Mary have [ VP ____ en leave] too. (cf. (5b))
References:
Grohmann (2003) argues that movement not only has to obey locality constraints such as Relativized Minimality, Shortest Move and Minimal Link, but is also subject to an Anti-Locality condition that prohibits movement within a ‘Prolific Domain’ unless the co-occurring copies are spelled out in phonetically distinct ways. The three Prolific Domains identified by Grohmann are given in (1).

Head-movement poses a potential problem for Grohmann’s approach, since it appears to be able to violate Anti-Locality without giving rise to Copy Spell Out. For instance, V-to-v movement takes place within the Θ-Domain, but the copy in V is simply left unpronounced, rather than surfacing in a form that is phonetically distinct from the copy in v (2). According to Grohmann, domain-internal head-movement complies with his Condition on Domain Exclusivity (3) because the complex head created by head-adjunction is morphosyntactically different from the lower copy of the moved head. However, the CDE requires co-occurring copies to have distinct PF-matrixes, and, as Grohmann himself concedes, positing different PF-matrixes for the higher and lower copy of a moved head would require us to abandon the Strong Lexicalist Hypothesis (cf. Chomsky 1993).

One way to get around the problem is to adopt Harley’s (2003) suggestion that head-movement is actually Conflation, a mechanism that involves the copying of the p-signature of a complement into the p-signature of a phonologically ‘defective’ head (cf. Hale & Keyser 2002). The locality of ‘head-movement’ will then fall out from the syntactic prerequisites for Conflation, which can only apply between a head and (the head of) its sister; and the absence of Anti-Locality effects will be due to the lack of actual movement.

In this paper, I propose that ‘head-movement’ between lexical heads is indeed Conflation, and therefore strictly local. Movement to a functional head, on the other hand, is a syntactic process that is subject to Anti-Locality. Conflation involves semantic selection, whereas syntactic head-movement serves to check inflectional features. I argue that V can conflate with v in (2), because v is a lexical head that contributes a causative θ-role and s-selects a complement headed by an inchoative V.

Evidence for Anti-Locality constraints on movement to functional heads in English comes from stative HAVE got (4). Although HAVE got looks like a perfect auxiliary followed by the past participle form of the verb GET, such an analysis of the HAVE got construction fails to account for the similarity in meaning between stative HAVE and HAVE got, and cannot explain why stative HAVE got should be confined to the simple present tense in many varieties of English (cf. Le Sourd 1976; Wasow & Akmajian 1977). I propose that the form HAVE got results from the Copy Spell Out of a stative HAVE that has raised to the functional head Pred (cf. Delfitto 2004), which is automatically projected in the simple present and responsible for its inherently habitual/characterizing interpretation. The movement of HAVE to Pred is triggered by a [pred] feature that sets stative HAVE apart from other lexical verbs. Since the argument in [Spec, PredP] is arguably merged in this position, PredP is best viewed as part of the Θ-Domain, which means that the lower copy of the raised HAVE needs to be spelled out in a phonetically distinct form to prevent a violation of the Condition on Domain Exclusivity (5).

If movement to functional head positions must obey Anti-Locality, we will need to account for the distribution of auxiliary verbs illustrated in (6) in terms of movement between Prolific Domains. I propose that all modal and nonmodal auxiliaries are merged in the Θ-Domain in English. If an auxiliary is tensed, it will then move on to a position in the Φ-Domain: Emphatic auxiliaries and auxiliaries contracted with not are attracted to Σ by an [emph]/[neg] feature in their lexical entry (cf. Laka 1994), and therefore follow adverbs like probably (6c-d). Unemphatic tensed auxiliaries not contracted with not precede probably because a strong [tense] feature in their lexical entry triggers movement to T (6e-f).

Baker’s (2003) Proper Head Movement Generalization (7) falls out naturally in the proposed approach. As Hale & Keyser (2002) point out, Conflation crucially relies on the semantic (s-selection) relationship between a head and the head of its complement. Since functional heads lack the semantic properties necessary to enter into an s-selection relation with another head, they are unable to participate in Conflation and thus unable to move into a lexical category.
(1) a. Θ-Domain, where thematic relations are created  
b. Φ-Domain, where agreement properties are licensed  
c. Ω-Domain, where discourse information is established

(2) $\begin{array}{c}
\text{DP} \\
\text{Callum}
\end{array}$

(3) **Condition on Domain Exclusivity (CDE)** (Grohmann 2003: 78)
For a given Prolific Domain $\Pi\Delta$, an object $O$ in the phrase-marker must receive an exclusive interpretation at the interfaces, unless duplicity of $O$ yields a drastic effect on the output of that $\Pi\Delta$. [i.e. unless the two occurrences of $O$ have different PF-matrixes]

(4) a. She’s got blue eyes.  b. She’s got two brothers  c. She’s got a red Porsche.

(5) $\begin{array}{c}
\text{PredP} \\
\text{She}
\end{array}$

(6) a. She probably *wouldn’t* have asked him.  b. She *would* probably not *have* asked him.  
c. She probably *HAS* asked him already.  d. She probably *hasn’t* even asked him.  
e. She’s probably asked him already.  f. She’s probably not even asked him.

(7) **Proper Head Movement Generalization** (Baker 2003: 306)
It is impossible to move from a functional category into a lexical category.

**References**
Based on a range of synchronic and diachronic phonological evidence, I argue that in the three-height vowel system of Persian, [low] and [high] are marked while [mid] is unmarked. This presents a challenge to the fixed universal hierarchy for height markedness according to which [mid] is more marked than [low] and [high] (e.g., Beckman 1997). The challenge for the fixed hierarchy is particularly strong because the same criteria which are used in literature to demonstrate the unmarkedness of [high] are used to determine that [mid] is unmarked in Persian. The widely suggested diagnostics for (un)markedness of a feature are as follows: unmarked elements result from neutralization, are likely to be epenthetic, are targets of assimilation, and are lost in coalescence and deletion (see Rice 1999 for a summary). For each of these in Persian, the mid vowel meets the unmarked criteria. To break up unpermitted clusters in Persian, /e/ is epenthesized both in loan words (e.g., pelastik ‘plastic’) and in suffixation in native words (e.g., sāxt followed by man results in sāxteman ‘building’). Persian exhibits several patterns of vowel harmony in all of which mid vowels are the targets while high vowels are the triggers (e.g., kēlid and hozur become kēlid ‘key’ and hozur ‘presence’ respectively). In Persian, /e/ is the result of neutralization both synchronically and historically. A general tendency of Persian in the last millennium is a change of [a] to [e] (Natel Khānlāri 1987). In final position, this change happened in all words except for na ‘no’ (e.g., mīvā in Middle Persian became mīve ‘fruit’ in Modern Persian). This change argues for the unmarkedness of [mid] not only because the result of neutralization is unmarked but also because it reduces the Persian vowel inventory to five vowels in final position. Marked features exhibit less variation in phonetic space since they are clearly defined as opposed to unmarked features which are not fixed in height (Rice 1999). The vowel /e/ is easily lost in Persian. For instance, when a vowel-ending noun is followed by the genitive marker -am ‘my’ and so vowel hiatus is resulted, all other vowels remain and [a] is deleted (e.g., bini followed by -am becomes binim ‘my nose’) unless the first vowel is /e/ in which case /e/ is deleted and [a] survives (e.g., fune followed by -am becomes funam ‘my shoulder’). So although the language has high vowels, mid vowels show the properties that are considered in literature for unmarked elements. This result is not predicted by the fixed universal hierarchy for markedness of vowel height which considers [mid] as more marked than [high]. This is, however, in accord with the idea that there is no single unmarked feature cross-linguistically. Different features, across languages, may be determined as unmarked—though this variation is not limitless—depending on the inventory of the language under study and the contrasts the features show in that inventory and also according to phonological patterning as the main diagnostic for markedness (Rice 1999).
References


Event passives

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It is a popular claim in the literature on passives and implicit arguments that passives semantically always include an implicit argument (see e.g. Bhatt & Pancheva 2006). Focusing on causative predicates in English and German (the latter is not included in the abstract), I will show that at least for passives of these predicates there are cases where no agent is implied, no matter how loosely the notion of ‘agent’ is understood.

In earlier generative syntactic analyses of passives, the assumption of an obligatorily semantically present agent followed necessarily from the theta criterion as there was no difference in argument structure for predicates in active or passive clauses. However, also after the introduction of a voice projection in derivational approaches to argument structure such as Distributed Morphology, the assumption of a semantically present agent has not been seriously disputed.

The point of departure of the analysis to be presented is Kratzer’s (1996) voice analysis, which will be treated as exemplary of some of the general deficits I want to point at. Kratzer assumes that the external argument is situated in [Spec,VoiceP]. Her semantics of voice may be represented as in (1). The voice projection is claimed to apply to all eventive predicates.

A first problem for the assumption of an implicit agent is that if one follows Kratzer, then the role of agent also has to be assigned to the 

\textit{by} phrases in (2), leaving the notion of ‘agent’ rather vacuous. The analysis could be saved by assuming that the agent role is indeed not very contentful, and that it should rather be seen as comprising all kinds of prominent participants.

While we may still accept such a weakening of the notion of ‘agent’, there exist further cases where no causing individual is present, but only a causing event (including natural forces), cf. (3). Such passives will be termed event passives. Besides a further weakening of the notion of agent as compared to the examples in (2), the application of the voice analysis in (1) runs into a more severe problem in the case of event passives: The variable \(x\) only allows arguments of the sort of individuals, whereas the arguments in the \textit{by} phrases in (3) can be argued to be events (non-formal approaches mostly ignore this sortal distinction too, cf. Van Valin & Wilkins 1996).

A more plausible analysis for event passives may be achieved by assuming that the event in the \textit{by} phrase is identified with the causing event included in the causative predicates damage and kill. Thus, the \textit{by} phrases in (3) will not be assumed to be associated with any semantic role. They will instead be assigned a semantics as indicated in (4) (for details see Solstad 2006, sect. 6.1). This amounts to treating the eventive \textit{by} phrase as a modifier and not as an argument. A similar solution is suggested by Pylkkänen (2002), but her analysis also suffers from the non-separation of individuals and events to the extent that she establishes an identity relation between an individual and an event (\(\ldots, e = x\) in her representation, cf. p. 85). It may also be noted that in my analysis there is no need to assume a semantic “causer” role (see e.g. Alexiadou & Schäfer 2006) as this property of the \textit{by} phrase is derived from the \textit{cause} predicate introduced by the causative predicate, cf. the simplified semantic representation of (3b) in (5).

It is important to note that event passives are only available for causative predicates like damage, kill or (the directional) wash ashore which are not inherently agentive (as opposed to e.g. execute, which always presumes a volitional agent). These predicates are characterised by the availability of an eventive subject in the active. It is assumed that damage or kill may or may not project an agent, whereas wash ashore may never project an agent, allowing only eventive
external arguments, cf. the examples in (6).

It may be added that event passives are not available in all languages, cf. Doron (2003) on Hebrew, in which passive voice can only be applied in the presence of a volitionally acting agent.

I conclude by briefly illustrating the main features of the underlying syntactic structure corresponding to the above, cf. (7): The external argument is located in [Spec, VoiceP]. In passives, a PRO occurs here (Sternefeld 1995). The PRO may be of individual (PRO_x) or event type (PRO_e). PRO_x, which presumes the inclusion of an agent, is bound by the agentive by phrase as indicated by the digit in (7a). PRO_e may be considered semantically empty apart from the identity relation referred to above. In event passives, the by phrase is adjoined to VP.

(1) \[ \lambda P \lambda x \lambda e [P(e) \land \text{AGENT}(x)(e)] \]

(2) a. The sidewalk was damaged by parkway trees.
   b. A 55-year-old woman walking in a forest was killed by a tree.

(3) a. A juror’s home was damaged by Sunday night’s storm.
   b. One person was killed by an earthquake-induced landslide along Highway 97.

(4) \[ \lambda P \lambda e_1 \lambda e [P(e) \land e_1 = e] \]

(5) \[ \exists e_2 \exists e_1 \exists e_3 \exists y \text{BECOME}(\text{dead})(y)(e_2) \land \text{CAUSE}(e_2)(e_1) \land \text{LANDSLIDE}(e_3) \land e_1 = e_3 \]

(6) a. \{ \begin{align*} 
\text{A storm} \\
\text{An outraged linguist} 
\end{align*} \} damaged a juror’s home.
   b. \{ \begin{align*} 
\text{High seas} \\
\text{The divers} 
\end{align*} \} washed the men ashore.

(7) a. a robber was killed by a policeman:
   \[ \text{VoiceP by a policeman}_1 [\text{VP a robber killed}] \]
   b. a person was killed by a landslide:
   \[ \text{VoiceP PRO}_e [\text{VP by a landslide [VP a person killed]}] \]

References

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Contrast and coarticulation: Evidence from the French vowel /i/
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The varying degree to which languages allow VN nasal coarticulation to occur is well documented. One explanation for this variation is that the phonetic phenomenon is suppressed when it would interfere with a phonemic contrast. I argue, based on phonetic data from French, that this variation may occur not only among languages, but also within a language, and that the variation can be similarly explained by a phonemic oral/nasal contrast in part of the vowel inventory.

Cohn (1990) presents phonetic data suggesting that vowels in VN sequences in English undergo much more nasal coarticulation than do those in French. She argues that this difference stems from the fact that French has phonemic nasal vowels and English does not. Manuel (1990) describes a similar effect of contrast on vowel harmony in three dialects of Yoruba. However, Cohn’s data focuses only on those vowels in French that have contrastive nasal and oral forms. My data shows that French /i/, which has no nasal counterpart, exhibits an English-like degree of nasal coarticulation, contradicting Cohn’s assessment of the language and calling for a more specific look at the role of contrast on coarticulation within a language.

My data is taken from spectrographic analysis of recordings of native French speakers. Comparison of the duration of nasal coarticulation in /i/ and /e/ when followed by a nasal consonant showed significantly more coarticulation in the /i/ tokens (average 52% of total vowel duration) than in the /e/ tokens (10% of total duration). I account for nasal coarticulation in general and the French data in particular using a surface underspecification model (cf. Meyers 1998) in Optimality Theory based on Keating’s (1988) window model of coarticulation. In my model, each vowel segment may be output to the phonetics bearing a specification of [+nasal] or [−nasal], or it may be unspecified. Similar to Kirchner’s (1998) LAZY, an UNSPEC constraint

\[ \text{UNSPEC} \rightarrow \text{be underspecified.} \]

Assign one * to each vowel segment bearing a [+ nasal] or [− nasal] specification. encourages economy of movement by eliminating “wasteful” movement. Unlike LAZY, however, UNSPEC allows for the categorical assignment of violations, leaving the gradient assessment of effort to the phonetics. Ranking UNSPEC along with two other constraints, ORAL (requiring that vowels bear a [− nasal] specification) and ID[+ nasal] (penalizing mismatch between [+nasal] specifications in the input and output, cf. De Lacy 2002), produces a typology of nasal coarticulation that matches the cross-linguistically attested typology.

The different behavior of high vowels in French suggests another constraint, UNSPEC(hiV), which assigns violations as UNSPEC does, but only to high vowels. Promotion of this single constraint can produce a language that lacks contrast and allows coarticulation in high vowels. This emphasizes the relationship between contrast and coarticulation.

My data calls for revision of the common understanding of French as a language with very little coarticulation. It also provides support for the relationship between contrast and coarticulation and suggests that differences in contrast within a language can cause differing amounts of coarticulation to be allowed. Additionally, my phonological analysis provides a simple model of underspecification that functions easily within the OT framework. This work opens the possibility of further research into the phonetics of coarticulation and the application of surface underspecification in OT to other features.
References

Japanese ECM as Embedded Bare Topicalization

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In this paper, I analyze “bare topicalization” in Japanese, which has not drawn much attention in generative syntax. The reason seems to be that bare topicalization, given as (1)a, and ordinary topicalization, given as (1)b, pattern in the same way with respect to a number of properties. However, I point out that they differ in that the former does not apply in embedded clauses, while the latter does, as shown in (2)a and (2)b, respectively. I argue that the apparent matrix/embedded asymmetry regarding bare topicalization actually does not exist. More specifically, I argue that in Japanese, embedded bare topicalization is allowed but has been simply treated as another independent construction; namely, Exceptional Case-marking (ECM).

First of all, I assume that a topic NP is licensed in SpecCP in Japanese (cf. Rizzi 1997). However, I assume that topicalization in Japanese does not involve movement, based on Hoji’s (1985) observation that it shows no reconstruction effects. For example, consider the contrast between scrambling and bare/ordinary topicalization, given in (3)a and (3)b, respectively (note that non-vacuously scrambled NPs must bear a Case-marker). In (3)a, pro can be interpreted as a variable bound by dare-ga ‘who’, while in (3)b, this interpretation is impossible. Thus, I assume that topicalization in Japanese has the structure like (4), as proposed by Tonoike (1989), among others.

The question is why the matrix/embedded asymmetry in (1) and (2) is observed. I claim that the ungrammaticality of (2)a is not due to the inapplicability of embedded bare topicalization per se, but to a violation of Bošković’s (2002: 170) Inverse Case Filter (5). I revise Inverse Case Filter as (6) in order to explain the contrast between (2)a and (7)b. In (2)a, the bare topic is base-generated in the embedded SpecCP, as shown in (4). Crucially, the embedded SpecCP is a position where Case-marking by the matrix v is possible, according to Chomsky’s (2000) Phase Impenetrability Condition (PIC). Thus, (6) is violated unless the matrix v Case-marks the bare topic, as in (7)b. Note also that the nominative NP in (7)a is base-generated in the embedded VP, a position c-commanded by the embedded T. Thus, in accordance with Agree Closest or PIC, it is impossible for the matrix v to Case-mark the embedded NP, and (6) is not violated even if the matrix v does not assign its accusative Case. In short, I am proposing that (7)b, the construction which has been treated as ECM, should be treated as a well-formed instance of embedded bare topicalization, and that the embedded SpecCP is a Case and a topic position at the same time in this type of construction. The proposed analysis is consistent with Bošković’s (in press) recent assumption that there may be a position which counts as a mixed A/A′-position.

Evidence for my analysis comes from the observation that the accusative NP in (7)b patterns with the topic NP in (3)b rather than the accusative NP in (3)a with respect to reconstruction. Note that the embedded predicate suki ‘like’ in (8) is unable to Case-mark the object as accusative, and hence the accusative NP is Case-marked by the matrix v. Under the proposed analysis, it would be an instance of bare (i.e. non-wa-marked) topic. The absence of reconstruction effect in (8) (i.e., pro cannot be interpreted as a variable bound by daremo ‘everyone’) supports my proposal that the construction in question should indeed be treated on a par with bare topicalization.
(1) a. Sono hito, kinoo-no ziken-no hannin da.
   that person yesterday-gen incident-gen culprit is
b. Sono hito-wa kinoo-no ziken-no hannin da.
   that person-top yesterday-gen incident-gen culprit is
   (lit.) ‘That person is the culprit of yesterday’s incident.’

   I-top that person yesterday-gen incident-gen culprit is that is thinking
b. Watasi-wa [ sono hito-wa kinoo-no ziken-no hannin da to ] omotteiru.
   I-top that person-top yesterday-gen incident-gen culprit is that is thinking
   (lit.) ‘I believe that that person is the culprit of yesterday’s incident.’

(3) a. [ pro_i kaita ronbun ]-o dare-ga, t_j happyoo-sita no.
   wrote article -acc who-nom present-did question
b. *[ pro_i kaita ronbun ](-wa), dare-ga, happyoo-sita no.
   wrote article -top who-nom present-did question
   ‘Who presented the article that s/he wrote?’

(4) [CP topic, [ C C [TP ... pro_i ... ] ] ]

(5) Traditional Case-assigners must assign their Case-feature.

(6) Traditional Case-assigners must assign their Case-feature whenever possible.

   I-top that person-nom yesterday-gen incident-gen culprit is that is thinking
   ‘I believe that that person is the culprit of yesterday’s incident.’
b. Watasi-wa [ sono hito-o kinoo-no ziken-no hannin da to ] omotteiru.
   I-top that person-acc yesterday-gen incident-gen culprit is that is thinking
   ‘I believe that person to be the culprit of yesterday’s incident.’

(8) *Watasi-wa [ [ pro_i kaita ronbun ]-o daremo-ga, suki da to ] omotteiru.
   I-top wrote article -acc everyone-nom like is that is thinking
   (lit.) ‘I believe that the article s/he wrote, everyone likes.’

Selected References:
Definiteness and scrambling in Dutch: where theory meets practice
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In this paper we want to reassess some theoretical claims about the relation between scrambling and definiteness. Scrambling is an instance of word order variation in which the direct object NP can either follow an adverb or precede it. In the first case the object is said to be in the unscrambled position in the second case in the scrambled position. Scrambling has received a lot of attention in the linguistic literature in particular in relation to its syntactic status, i.e. whether it constitutes an instance of movement (see Bailyn 2002 for an overview), and to its semantic status, i.e. what are the interpretational correlates of scrambling (see, e.g., de Hoop 1992, Diesing and Jelinek 1995, Van Geenhoven 1996). In this paper we concentrate on the latter issue.

The definiteness of the direct object has often been invoked as an explanation for the scrambling behaviour of certain elements over others. Diesing (1992; cf. also Diesing and Jelinek 1995), for instance, argues that due to a conflict between their semantic type and the operation of existential closure at the level of VP pronouns and definite (non-quantificational) NPs have to scramble. Indefinite NPs can scramble in which case they receive a non-existential (specific) interpretation, when they do not scramble they are bound by existential closure and receive an existential interpretation. For Dutch, the semantic scrambling picture has been modified somewhat by de Hoop (2003; see also de Hoop 1992). She argues that in this language definite objects do not scramble obligatorily but rather optionally (see also Neeleman and Reinhart 1998). Moreover, the scrambling behaviour of definite NPs is affected by their anaphoricity. In particular, the analysis by de Hoop (2003) predicts anaphoric objects to scramble in two-thirds of the cases.

In order to test these theoretical claims about the relation between definiteness and scrambling behaviour we conducted a large scale investigation of scrambling in Dutch. We have extracted from the Corpus Gesproken Nederlands (CGN, Corpus Spoken Dutch) 2900 sentences with a direct object either directly following or preceding an adverb. Each sentence was annotated for the position of the object relative to the adverb (scrambled, unscrambled) and for the definiteness of the object (pronoun, definite, and indefinite). Moreover, definite objects were additionally annotated for their anaphoric status. The results show that pronominal objects indeed scramble in more than 95% of the cases. Indefinite objects, on the other hand, only scramble in less than 10% of the cases. Definite objects pattern with indefinites as they only scramble in less than 20% of the cases. Anaphoricity does not alter this behaviour drastically as anaphoric definites scramble in approximately a quarter of the cases (against non-anaphoric definites which scramble in less than 10% of the cases).

Our study shows that the theoretical predictions by Diesing and de Hoop (and others) are not fully realized in the actual scrambling data. Definite object NPs do not scramble obligatorily and their scrambling behaviour neither seems to be truly optional. In fact, definites show a tendency not to scramble at all. As a result, definiteness cannot be considered a force driving scrambling. The same holds for anaphoricity, which also has no significant influence on the scrambling behaviour of definite object NPs. This fits in with the general picture emerging from the data when pronouns are left out of consideration: the scrambled word order is clearly disfavoured.

In sum, we can conclude that there is a clear asymmetry between the role of definiteness and anaphoricity in the production of scrambling on the one hand and its interpretation on the other. Whereas scrambling may affect the meaning of objects (as indefinite objects will almost always receive a specific interpretation if they are scrambled), from a production perspective, definiteness and anaphoricity features do not cause objects to scramble.