



**GLOW Newsletter #76, Spring 2016**

Edited by Marc Richards

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# GLOW Newsletter & Conference Handbook

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## CHANGES TO THE BOARD

The current composition of the GLOW Board is given in the table below.

Congress President	Hedde Zeijlstra	2015-2016
Chairperson	Sjef Barbiers	2015-2017
Secretary	Jeroen van Craenenbroeck	2015-2017
Treasurer	Sergio Baauw	2015-2017
Newsletter Editor	Marc Richards	2014-2016
Journal Editor	Harry van der Hulst	
Website Manager	Alexis Dimitriadis	2015-2017
Member A	Roberta D'Alessandro	2014-2016
Member B	Mojmír Dočekal	2015-2017
Member C	Sarah Zobel	2015-2017
Member D	Clàudia Pons Moll	2014-2016
Advisory Member 1	Henk van Riemsdijk	
Advisory Member 2	Martin Everaert	
Co-opted member (Phonology)	Tobias Scheer	2015-2017
Co-opted member (GLOW Asia)	Pritty Patel	2015-2017

Every year, several positions come up for renewal. Nominations are normally sent directly to the Chair, who accepts until January 1st. The GLOW Board wishes to remind GLOW members to be thinking about who they would like to represent them on the Board in the future, and to nominate those people in good time.

For the coming year, the following positions are up for replacement, renewal or (re-)election:

- Congress President (Netherlands meeting)
- Newsletter Editor
- Member A – Roberta D'Alessandro (standing for re-election)
- Member D – Clàudia Pons Moll (standing for re-election)

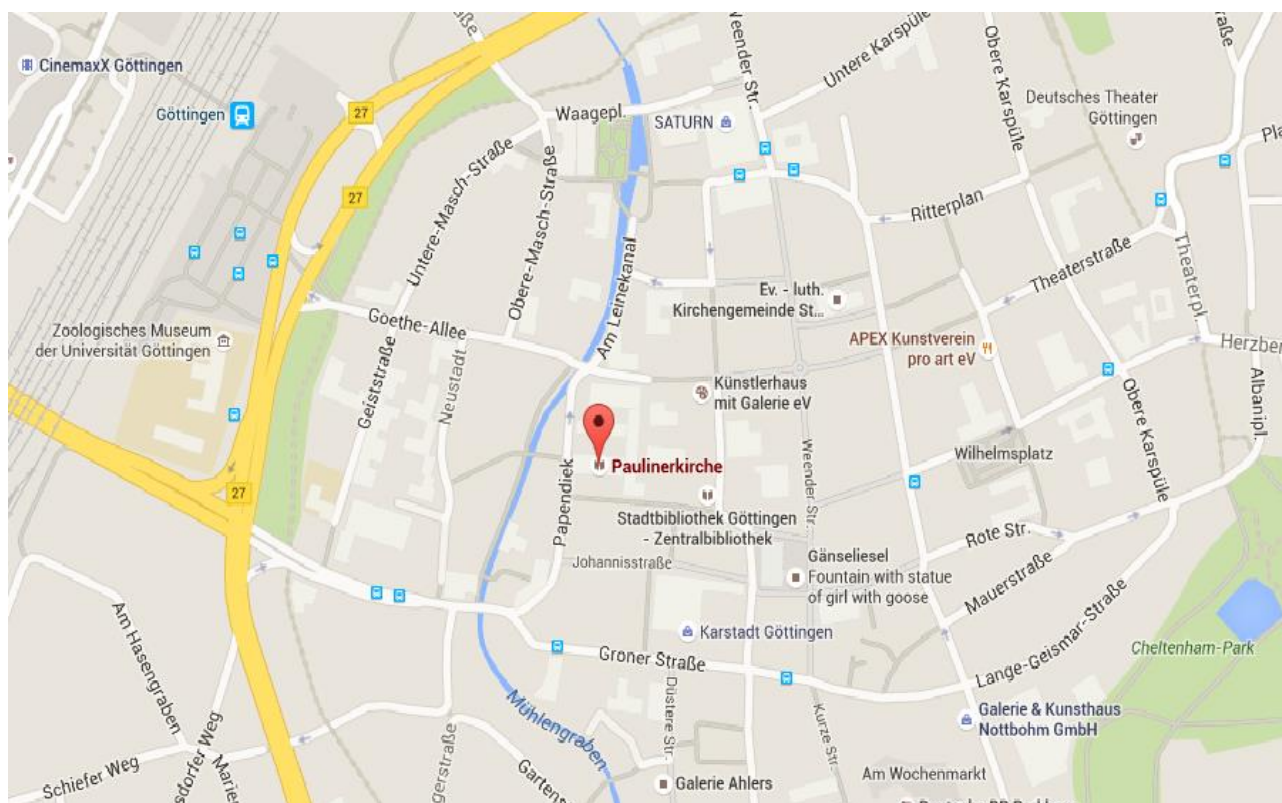
# Welcome to GLOW 39, Göttingen!

The 39th GLOW Conference and annual meeting is taking place in Göttingen from the 5th to the 8th of April 2016. It is being hosted by [LinG – Linguistics in Göttingen](#). Following the Main Colloquium (Tuesday 5th April to Thursday 7th April), there will be two thematic workshops taking place on Friday 8th April: “Perspectivization” and “Phonological and Syntactic Representation of Speech Acts”.

## PRACTICAL INFORMATION

### CONFERENCE SITE

The conference venue for GLOW 2016 is the [Paulinerkirche](#) (Pauliner Church) in central Göttingen.



### TRAVEL INFORMATION

We recommend that you fly to Frankfurt. There is a direct intercity train (ICE) from Frankfurt Airport to Göttingen. You can buy tickets online at [www.bahn.de](http://www.bahn.de). Select *Frankfurt Flughafen Fernbahnhof* as your point of departure. If you buy the ticket

online ahead of time, you will need to bring the credit card that you used for your booking for identification on the train. It is easiest to take a taxi to your hotel (this should cost no more than €10).

You might also find the [City of Göttingen Traveller Information](#) website useful.

## ACCOMMODATION

A variety of single and double rooms have been block-booked for the dates of April 4-8 at the following hotels. In order to claim the university discount that is included in the prices given below, you must place your reservation directly via email, quoting the reservation code "GLOW 2016 Göttingen University" in the subject line. That is, **you will not be eligible for the discount if you place your reservation online through the hotels' own booking web-forms or via third-party booking platforms.** (Please note that some of these offers may have expired by the time of publication of this newsletter.)

- [Hotel STADT HANNOVER:](#)

Single rooms: €77.00 (13 rooms available)

Double rooms (for single room use): €89.00 (14 rooms available)

**Please make your reservation before March 4th, 2016!**

Address: Goethe-Allee 21, 37073, Goettingen

Phone: +49-551-547960

Email: [info at hotelstadthannover.de](mailto:info@hotelstadthannover.de)

- [HOTEL CENTRAL:](#)

Single rooms: €82.00 (10 rooms available)

Double rooms: €105.00 (10 rooms available)

**Please make your reservation before February 15th, 2016!**

Address: Juedenstr. 12, 37073, Goettingen

Phone: +49-551-57157

Email: [info at hotel-central.com](mailto:info@hotel-central.com)

- [Intercity Hotel](#):

Single rooms: €80.00  
 Double rooms: €110.00  
 (20 rooms available in total)

**Please make your reservation before February 20th, 2016!**

Address: Bahnhofsallee 1a, 37081, Goettingen  
 Phone: +49-551-5211-0  
 Email: [goettingen at intercityhotel.de](mailto:goettingen@intercityhotel.de)

## REGISTRATION

Everybody attending GLOW 39 (including presenters) must be a paid-up member of GLOW. Information on how to join is available on the [GLOW homepage](#). Additionally, attendees are also required to register for the conference. Please register online at the following address: <https://www.uni-goettingen.de/en/510403.html>

## REGISTRATION FEES

Please pay in cash on the first day of the conference!

<i>Faculty:</i>	€75
<i>Students (PhD and non-PhD):</i>	€55
<i>Conference dinner:</i>	€35

## SPEAKER REIMBURSEMENT

Presenters will be partially reimbursed for travel and accommodation expenses, up to the following maximum amounts per presented paper:

Europe, faculty:	€150
Europe, student:	€250
Overseas, faculty:	€250
Overseas, student:	€400

## CONTACT INFORMATION

For further information, please consult the [GLOW 39 Göttingen website](#). Please direct all email enquiries to [glow2016@uni-goettingen.de](mailto:glow2016@uni-goettingen.de).

## **SELECTION PROCEDURE**

A total of 213 abstracts were submitted for the Main Colloquium (and an additional 42 for the workshops: 19 for the workshop on perspectivization and 23 for the workshop on speech acts). Of these abstracts 20 were accepted for an oral presentation at the Main Colloquium (plus three alternates and one evening lecture), and eight abstracts plus three alternates were selected for each for the workshops. The acceptance rate (including alternates) for the Main Colloquium is thus 11.3%. An additional 44 abstracts were accepted as posters.

Each of these 213 abstracts was sent to five external reviewers. After the review procedure, the selection committee (consisting of three GLOW Board members and three local organizers) read and scored (a) the 50 abstracts that scored best according to the ranking made by the external reviewers, and (b) 20 abstracts with a very high standard deviation (i.e. for which there was substantial inter-reviewer disagreement). These 70 abstracts were discussed one by one. On the basis of the reviewers' comments (both the confidential remarks and the actual reviews) and the assessments and reviews by the six committee members, 20 abstracts were identified for presentation at the Colloquium, one abstract was considered most suitable as an evening lecture, and three abstracts were selected as alternates. The large majority of those abstracts discussed by the committee but not selected for oral presentation – 44 abstracts – were selected for poster presentations.

## STATISTICS BY COUNTRY

Table 1: Including poster presentations

<u>Country</u>	<u>Authors</u>	<u>Submitted</u>	<u>Accepted (talks and posters)</u>	<u>Acceptance rate</u>
Argentina	2	2	0	0
Austria	2	2	1	0.5
Azerbaijan	2	2	0	0
Belarus	1	1	0	0
Belgium	8	6	1.5	0.25
Brazil	1	0.5	0.5	1
Canada	29	17.35	8	0.46
China	1	1	0	0
Czech Republic	1	1	0	0
Egypt	2	1	0	0
France	8	6	3	0.5
Germany	31	24.66	10.5	0.5
Greece	2	1.5	1.5	1
Hungary	1	1	0	0
India	6	3.99	0.99	0.25
Israel	3	3	1	0.33
Italy	5	3.5	0.5	0.14
Japan	19	15.5	1.5	0.97
Madagascar	1	0.33	0	0
Netherlands	11	7.66	3.5	0.46
North Korea	1	0.5	0	0
Norway	2	1.5	0	0
Poland	2	2	0	0
Portugal	1	1	0	0
Puerto Rico	3	0.99	0	0
Russian Federation	2	2	0	0
Serbia	1	1	0	0
Singapore	1	2	0	0
South Korea	4	3	1	0.33
Spain	8	7	2	0.29
Switzerland	3	2.5	1	0.4
Taiwan	4	4	0	0
Tunisia	1	1	1	1
Turkey	3	2.5	0.5	0.2
UK	32	24.49	12.5	0.51
United Arab Emirates	1	1	0	0
USA	109	94.95	35.96	0.38
<b><u>TOTAL</u></b>	306	246.92	82.45	
<b><u>Rounded</u></b>	306	247	83	

**Table 2: Oral presentations only**

<b><u>Country</u></b>	<b><u>Authors</u></b>	<b><u>Submitted</u></b>	<b><u>Accepted (talks only)</u></b>	<b><u>Acceptance rate</u></b>
Argentina	2	2	0	0
Austria	2	2	1	0.5
Azerbaijan	2	2	0	0
Belarus	1	1	0	0
Belgium	8	6	0	0
Brazil	1	0.5	0	0
Canada	29	17.35	2.5	0.14
China	1	1	0	0
Czech Republi	1	1	0	0
Egypt	2	1	0	0
France	8	6	1	0.17
Germany	31	24.66	7.5	0.3
Greece	2	1.5	0.5	0.33
Hungary	1	1	0	0
India	6	3.99	0	0
Israel	3	3	0	0
Italy	5	3.5	0.5	0.14
Japan	19	15.5	0.5	0.03
Madagascar	1	0.33	0	0
Netherlands	11	7.66	3	0.39
North Korea	1	0.5	0	0
Norway	2	1.5	0	0
Poland	2	2	0	0
Portugal	1	1	0	0
Puerto Rico	3	0.99	0	0
Russian Feder	2	2	0	0
Serbia	1	1	0	0
Singapore	1	2	0	0
South Korea	4	3	1	0.33
Spain	8	7	0.5	0.08
Switzerland	3	2.5	0	0
Taiwan	4	4	0	0
Tunisia	1	1	1	1
Turkey	3	2.5	0.5	0.2
UK	32	24.49	7	0.29
United Arab E	1	1	0	0
USA	109	94.95	16.48	0.18
<b><u>TOTAL</u></b>	306	246.92	40.98	
<b><u>Rounded</u></b>	306	247	41	

## GLOW 39 MAIN COLLOQUIUM PROGRAM: April 5-7, Pauliner Church

	TUESDAY 5 APRIL	WEDNESDAY 6 APRIL	THURSDAY 7 APRIL
<b>8:30-9:00</b>	REGISTRATION		
<b>9:00-10:00</b>	<b>Philipp Weisser</b> (UConn)  <i>The morphotactics of the Eastern Mari nominal template (featuring the Duke of York)</i>	<b>Doreen Georgi</b> (Ecole Normale Supérieure) & <b>Martin Salzmann</b> (Leipzig)  <i>Local modeling of the gap/resumptive complementarity under top-down Case attraction</i>	<b>Thomas McFadden</b> (ZAS) & <b>Sandhya Sundaresan</b> (Leipzig)  <i>Obligatorily Control is fallible: Failure of OC PRO yields pro</i>
<b>10:00-11:00</b>	<b>Sakshi Bhatia, Leland Kusmer &amp; Ekaterina Vostrikova</b> (UMass Amherst)  <i>Indirect interaction of person and number</i>	<b>Peter W. Smith</b> (Frankfurt)  <i>Semantic Agreement and the Mechanism of AGREE</i>	<b>Nicholas Longenbaugh</b> (MIT)  <i>Rethinking the A/A'-distinction: Evidence from English Tough Movement</i>
<b>11:00-12:00</b>	COFFEE + <b>POSTER SESSION 1</b>	COFFEE + <b>POSTER SESSION 2</b>	COFFEE + <b>POSTER SESSION 3</b>
<b>12:00-13:30</b>	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK
<b>13:30-14:30</b>	<b>Ethan Poole</b> (UMass Amherst)  <i>The locality of dependent case</i>	<b>Carlo Geraci</b> (Institut Jean Nicod)  <i>Possessives in (three) Sign Languages</i>	<b>Nicholas Longenbaugh</b> (MIT) & <b>Maria Polinsky</b> (UMaryland)  <i>Subject/object symmetry: A spurious effect</i>
<b>14:30-15:30</b>	<b>Michelle Yuan</b> (MIT)  <i>Clitic dissimilation and dependent case</i>	<b>Sangyoon Kim</b> (Hankuk University of Foreign Studies)  <i>Two structural sources for possessives: Evidence from Spanish alienable possessive constructions</i>	<b>Elena Anagnostopoulou</b> (Crete) & <b>Christina Sevdali</b> (Ulster)  <i>Two modes of dative Case assignment: Evidence from the history of Greek</i>
<b>15:30-16:00</b>	COFFEE	COFFEE	COFFEE

<b>16:00-17:00</b>	<b>Giorgos Spathas</b> (HU Berlin) & <b>Dimitris Michelioudakis</b> (York)  <i>The scope of additive operators: An argument for syntactic event decomposition</i>	<b>Jon Sprouse</b> (UConn), <b>Sagar Indurkya</b> (MIT), <b>Sandiway Fong</b> (Arizona), <b>Beracah Yankama</b> (MIT) & <b>Robert Berwick</b> (MIT)  <i>Colorless green ideas still do sleep furiously</i>	<b>Andrew Murphy</b> (Leipzig)  <i>Syntactic gangs: Cumulative effects with weighted constraints</i>
<b>17:00-18:00</b>	<b>Ashwini Deo</b> (Yale)  <i>The performativity of aspect: Imperfective assertions in Marathi</i>	<b>Henri Kauhanen &amp; George Walkden</b> (Manchester)  <i>A production bias model of the Constant Rate Effect</i>	<b>Uli Sauerland</b> (ZAS), <b>Ayaka Tamura</b> (Tohoku U), <b>Masatoshi Koizumi</b> (Tohoku U) & <b>John Michael Tomlinson</b> (ZAS)  <i>A Conjunctive Disjunction in Japanese</i>
<b>18:00-18:15</b>	BREAK	BREAK	GLOW BUSINESS MEETING
<b>18:15-19:15</b>	<b>Naomi Francis</b> (MIT)  <i>Scope in negative inversion constructions: Evidence from positive polarity item modals</i>	<b>Ashwini Deo, Sara Sanchez-Alonso &amp; Maria Pinango</b> (Yale)  <i>Varying circumstances of evaluation and the ser/estar distinction in Spanish</i>	
<b>Evening program</b>	Sekt reception	<u>EVENING LECTURE:</u>  <b>Theresa Biberauer &amp; Ian Roberts</b> (Cambridge)  <i>Emergent parameters and syntactic complexity: New perspectives</i>	CONFERENCE DINNER

### **Alternates:**

1. **Harris Constantinou** (Leeds) & **Hans van de Koot** (UCL)  
*Subjective Containment*
2. **Jeremy Pasquereau** (UMass Amherst)  
*Overt movement of comparative quantifiers in European French*  
*Overt movement of comparative quantifiers in European French*
3. **Susanne Wurmbrand** (UConn)  
*Fake indexicals: Germanic child care and gendered relatives*

## POSTER SESSIONS PROGRAM

### Poster Session 1: Tuesday 5 April (11:00-12:00)

**Stefan Keine** (UMass Amherst)

*Case does not constrain A-movement: Superraising in Hindi-Urdu*

**Guillaume Thomas** (Toronto) & **Yasutada Sudo** (UCL)

*Cumulative readings of 'each'*

**Melissa Farasyn & Anne Breitbarth** (Ghent)

*Null subjects in Middle Low German*

**Coppe van Urk** (QMUL)

*Why A-movement does not license parasitic gaps*

**Jeremy Kuhn** (ENS-CNRS Paris)

*Telicity and iconic scales in ASL*

**Harris Constantinou** (Leeds) & **Hans van de Koot** (UCL)

*Subjective Containment*

**Kristen Fleckenstein & Suwon Yoon** (UTA)

*Jespersen's Cycle and scope of negation in American Sign Language*

**Nino Grillo** (Stuttgart) & **Keir Moulton** (Simon Fraser University)

*Clausal Determiners and Long Distance AGREE in Italian*

**Marcin Dadan, Kadir Gökgöz, Sabine Laszakovits, Jayeon Park & Yongsuk Yoo** (UConn)

*The Real(is) Distinction in Before and After Clauses: A Crosslinguistic Study*

**Dunja Veselinovic** (NYU)

*Concord Failures: Defective Intervention in the Nominal Domain*

**Erik Zyman** (UCSC)

*Adjunct Stranding, Late Merger, and the Timing of Syntactic Operations*

**Carmen Dobrovie-Sorin** (CNRS-LLF Paris) & **Marcelo Ferreira** (São Paulo)

*Brazilian Count Bare NPs and the Number of Reciprocal Predicates*

**Alan Ke, Sam Epstein, Acrisio Pires & Richard Lewis** (UMich)

*Syntactic Constraints on Quantifier Domain: An Experimental Study of the quantifier *dou* in Mandarin Chinese*

**Ailis Cournane** (Mannheim)

*Omission evidence for child V-to-T upwards (re)analysis*

## **Poster Session 2: Wednesday 6 April (11:00-12:00)**

**Dmitry Ganenkov** (Bamberg)

*Eccentric agreement can be monstrous*

**Jeroen van Craenenbroeck** (Leuven) & **Marjo van Koppen** (Utrecht)

*A microparameter in a nanoparametric world*

**Susanne Wurmbrand** (UConn)

*Fake indexicals: Germanic child care and gendered relatives*

**Jason Merchant** (Chicago)

*Categorizing heads are I-selectors: Idiosyncratic PP selection can vary by lexical category*

**Ömer Demirok** (MIT)

*A Compositional Semantics for Turkish Correlatives*

**Sampson Korsah** (Leipzig)

*On replication and polarity in Ga*

**Miloje Despic, Michael Hamilton & Sarah Murray** (Cornell University)

*A syntactic account of person/number marking in Cheyenne*

**Bronwyn Bjorkman** (Queen's) & **Peter Jurgec** (Toronto)

*Indexing constraints to words: evidence from derived environment effects*

**Rahul Balusu** (EFLU), **Gurujegan Murugesan** (IGNTU) & **Rajamathangi S** (JNU)

*Bagel Problem Items in Telugu and Tamil*

**Yongsuk Yoo** (UConn)

*Extractability in Agreeing/Non-Agreeing Modifier Constructions*

**Patricia Schneider-Zioga** (CSUF)

*There is not just one way to agree*

**Yushi Sugimoto** (Sophia)

*De-Phasing Effect: External Pair-Merge of phase head and non-phase head*

**Karoliina Lohiniva** (Geneva)

*Wh-kin: multiple wh and additivity in Finnish interrogatives and declaratives*

**Stefan Keine, Jon Ander Mendia & Ethan Poole** (UMass Amherst)

*It's tough to reconstruct*

### **Poster Session 3: Thursday 7 April (11:00-12:00)**

**Heather Burnett** (CNRS Paris) & **Sali Tagliamonte** (Toronto)  
*Using Intra-Speaker Variation to Diagnose Syntactic Structure*

**Jeremy Pasquereau** (UMass Amherst)  
*Overt movement of comparative quantifiers in European French*

**Maria-Margarita Makri** (MIT)  
*Expletive Negation, Epistemic Modality and Sentential Complementation*

**Jamie Douglas** (Cambridge) & **Michelle Sheehan** (Anglia Ruskin University)  
*Two ways to be syntactically ergative: on avoiding defective intervention*

**Adam Szczegielniak** (Rutgers University)  
*Ellipsis licensed via Prosodic Structure is Phase Constrained*

**Liz Smeets & Michael Wagner** (Montreal)  
*The Syntax of Focus Association in German/Dutch: Evidence from Scope Reconstruction*

**Gabriela Alboiu** (YorkU) & **Virginia Hill** (UNB)  
*(Non)Clitic Status of Auxiliaries and A versus A-bar Head Movement*

**Despina Oikonomou** (MIT) & **Artemis Alexiadou** (Berlin)  
*Interpretation Domains in the Verbal Spine: Synthetic vs. Analytic morphology*

**Julia Bacskai-Atkari** (Potsdam)  
*A feature-based approach to Doubly Filled Comp effects*

**Maria Barouni** (University of Crete)  
*A unified analysis of Negative Concord*

**Jon Ander Mendia** (UMass Amherst)  
*Conventionalizing at least some determiners*

**Antonio Fábregas** (Tromsø) & **Angel Luis Jiménez-Fernández** (Sevilla)  
*What subextraction from depictives can tell us about lexical aspect in first phase syntax*

**Michael Hamilton** (Cornell University)  
*The relation between phase heads and non-phase heads: Algonquian languages vs. Miyagawa 2010*

## GLOW 39 WORKSHOP I PROGRAM: *Friday 8 April*

### Perspectivization

09:00-09:45	<u>INVITED TALK</u> <b>Stephen Wechsler</b> (University of Texas at Austin) <i>Dedicated Self-Ascriptions in Egophoric Constructions</i>
09:45-10:00	Coffee break
10:00-10:30	<b>Sandhya Sundaresan</b> (University of Leipzig) <i>Perspective and reflexivity: Why reflexives resist being perspectival</i>
10:30-11:00	<b>Dorothy Ahn &amp; Isabelle Charnavel</b> (Harvard University) <i>Relevance of perspective in syntax: New evidence from Korean anaphors</i>
11:00-11:15	Coffee break
11:15-11:45	<b>John Gluckman</b> (UCLA) <i>Intervention in tough-movement: a semantic analysis</i>
11:45-12:15	<b>Pranav Anand</b> (UCSC) & <b>Natasha Korotkova</b> (UCLA) <i>Predicates of personal taste and de re construal</i>
12:15-14:30	Lunch break
14:30-15:00	<b>Yasutado Sudo</b> (University College London) <i>'Come' and 'go' with a Shift in Perspective</i>
15:00-15:30	<b>Corien Bary</b> (Radboud University, Nijmegen) <i>Why the historical present is not the mirror image of free indirect discourse</i>
15:30-15:45	Coffee break
15:45-16:15	<b>Elsi Kaiser</b> (USC) <i>Pronominal patterns in Finnish reported speech and free indirect discourse</i>
16:15-16:45	<b>Eva-Maria Remberger</b> (University of Vienna) <i>Perspectivization by evidential markers and quotation</i>
16:45-17:00	Coffee break
17:00-17:45	<u>INVITED TALK</u> <b>Jesse Harris</b> (UCLA) <i>tba</i>
Alternate	<b>Leopold Hess</b> (Radboud University, Nijmegen) <i>Commitment Attribution and Anaphoric Dependencies in Free Indirect Discourse</i>

## GLOW 39 WORKSHOP II PROGRAM: *Friday 8 April*

### Phonological and Syntactic Representation of Speech Acts

09:00-09:45	<b>INVITED TALK</b> <b>Liliane Haegeman</b> (Ghent) & <b>Shigeru Miyagawa</b> (MIT) <i>The syntax of participants</i>
09:45-10:00	Coffee break
10:00-10:30	<b>Virginia Hill</b> (UNB) <i>Allocutive agreement through mesoclis</i>
10:30-11:00	<b>Faruk Akkus</b> (Yale) <i>Inverse vocatives: the issue of reference and agreement mismatch</i>
11:00-11:15	Coffee break
11:15-11:45	<b>Dennis Ott</b> (Ottawa) <i>Nominal appositives as speech acts</i>
11:45-12:15	<b>Mohamed Jlassi</b> (Newcastle) <i>Syntactizing discourse particles in Arabic: evidence from a three-tiered speech acts structure in Tunisian Arabic</i>
12:15-14:30	Lunch break
14:30-15:00	<b>Mara Frascarelli</b> (Rome III) & <b>Angel Luis Jiménez-Fernández</b> (Sevilla) <i>Imperatives and their left periphery</i>
15:00-15:30	<b>Ezra Keshet</b> (UMich) & <b>David Medeiros</b> (CSU Northridge) <i>Imperatives above and below conjunction</i>
15:30-15:45	Coffee break
15:45-16:15	<b>Alice Corr</b> (Cambridge) <i>Structure beyond Force? Evidence for a 'speech act' projection from Ibero-Romance</i>
16:15-16:45	<b>Jiri Kaspar</b> (UCL) <i>Czech embedded root phenomena</i>
16:45-17:00	Coffee break
17:00-17:45	<b>INVITED TALK</b> <b>Pilar Prieto Vives</b> (ICREA-Universitat Pompeu Fabra) <i>Intonational encoding of epistemic operations across speech acts: Commitment and agreement operators</i>

Alternate 1	<b>Rebecca Woods</b> (York) <i>The embeddability of illocutionary force</i>
Alternate 2	<b>Monica-Alexandrina Irimia</b> (York) <i>Indirect evidentials and TAM: More arguments for the sentence domain projection</i>
Alternate 3	<b>Carlos de Cuba</b> (Queens College-CUNY) <i>Speech acts, root phenomena and truncation</i>

## Relevance of perspective in syntax: new evidence from Korean anaphors

**1. Background and Goal** - The notion of perspectivization is obviously crucial in language at the semantic and pragmatic levels: the source of a discourse determines its interpretation, as shown in detail by the *de re/de dicto* distinction for instance. The role perspective plays at the syntactic level is however less clear. This paper aims at tackling this broad issue by examining so-called exempt anaphors, specifically in Korean that sheds new light on the issue.

For more than forty years, it has been observed that in various languages, some anaphors seem to be exempt from the structural conditions imposed by Condition A (Chomsky 1986, a.o.). This property has been more or less precisely related to logophoricity, a term originating from specific pronouns found e.g. in West African languages that have to refer to centers of perspective (Clements 1975, a.o.): reflexives in languages like Icelandic (Maling 1984, a.o.), Mandarin (Huang & Liu 2001, a.o.) or Japanese (Kuno 1987, a.o.) have been assumed to be able to escape locality conditions when anteceded by “perspective centers”, “subjects of consciousness”, or more specifically by Source, Self, or Pivot (Sells 1987). It still remains controversial, however, how to pinpoint the exact perspectival properties of such exempt anaphors, and how to explain the link between locality and logophoricity.

The goal of this paper is to show that the Korean anaphor *caki-casin*, though usually considered a non-exempt anaphor, provides new insights on the former issue: the new tests and experimental studies described below reveal that a) perspective is in fact crucial to understand the distribution of this anaphor; b) at least two types of perspective (attitude and empathy) need to be distinguished for these syntactic reasons.

**2. *Caki-casin* as an exempt, perspective-sensitive anaphor** – *Caki-casin* is standardly assumed to be a strictly local anaphor (Cole *et al.*, a.o.). But recently, Kim & Yoon (2009) have argued based on the availability of strict readings that *caki-casin* can be exempt when it appears in logophoric environments using Sells’ categories Self, Source, and Pivot. Their study however suffers from some problems: (i) they presuppose that only exempt anaphors exhibit strict readings in ellipsis contexts without testing local anaphors, but Hestvik’s (1995) observation that strict readings can be obtained with locally bound *himself* in subordinate clauses questions the test; (ii) they do not independently determine the relevant domain for locality so there is no clear division between exempt anaphors and local anaphors. For these reasons, we propose new strategies to corroborate Kim & Yoon’s findings.

**2.1. Study 1: Distribution of the inanimate anaphor *cachey*** - First, we used the inanimacy strategy proposed in Charnavel & Sportiche (to appear) to independently define the locality domain of Korean anaphors: while there is no consensus on the exact definition of a perspective center, one thing that crucially holds is that, under any definition of logophoricity, inanimates cannot be logophoric centers since they lack a mental state; thus, inanimates are a precious tool for determining the scope of Condition A without the confound of logophoricity. Drawing on this idea, we examined the behavior of the understudied inanimate Korean anaphor *cachey* to use it as a baseline for plain anaphor-hood.

39 native Korean speakers were asked to complete a Grammaticality Judgment Task using a 6-point Likert scale, with 54 sentence items presented one by one in a randomized order. The sentences were divided into 3 groups: A- clausemate, c-commanding antecedent (1); B- clausemate, non c-commanding antecedent (2); C- non-local c-commanding antecedent, i.e. in different tensed clause (3).

- |  |           |
|--|-----------|
| (1) [i senpak] <sub>i</sub> -un cachey <sub>i</sub> -uy chwucinlyek-ulo wumcikil swu iss-ta.<br>‘[This ship] <sub>i</sub> can move using its <sub>i</sub> momentum.’                             | [Group A] |
| (2) *[i kwail] <sub>i</sub> -uy caypayca-nun cachey <sub>i</sub> -uy khentisyen-ul cacwu hwakinhanta.<br>‘[This fruit] <sub>i</sub> ’s grower checks its <sub>i</sub> condition often.’          | [Group B] |
| (3) *[i os] <sub>i</sub> -un cwuin-i cachey <sub>i</sub> -lul culkye ipnun-ta-nun kes-ul poyecwunta.<br>‘[This clothing] <sub>i</sub> shows that the owner likes to wear it <sub>i</sub> often.’ | [Group C] |

Group A was rated significantly higher than group B ( $p < 0.0001$ ) and group C ( $p < 0.0001$ ). This

means that a plain anaphor in Korean must have an antecedent that c-commands it within its smallest TP, which sets the baseline for Condition A in Korean.

**2.2. Study 2: Logophoricity effects on the anaphor *caki-casin*** – The goal of our second study (including 38 Korean speakers and 69 sentence items) was to look at the distribution of *caki-casin* in the same environments and to specifically focus on how *caki-casin* was licensed in Groups B and C (which did not license the inanimate anaphor *cachey*) depending on logophoricity. Specifically, we determined two types of logophoric centers, attitude holders and empathy loci, based on specific tests we defined: the epithet test and the sibling test.

**2.2.1. Attitude and epithet test** – We first hypothesized that one logophoric factor relevant for exempting *caki-casin* from Condition A is making the antecedent an attitude holder, which is an independently well-circumscribed notion (at least since Frege’s (1892) observation that the substitution of coreferring terms in attitude contexts can change the truth conditions). We thus made the antecedents of *caki-casin* in group C subjects of intensional predicates like *think* as in (4). To test whether these antecedents are indeed attitude holders, we replaced *caki-casin* with an epithet like *ku papo* (‘that idiot’) in (4) and checked whether the sentence becomes unacceptable: this epithet test is based on Dubinsky & Hamilton’s (1998) observation that an epithet cannot be anteceded by an individual from whose perspective its attributive content is evaluated.

- (4) **Cina<sub>i</sub>**-nun kkwucwunhan wuntong-i {a.cakicasin<sub>i</sub>/b.\*ku papo<sub>i</sub>}-lul pakkwuko issta-ko sayngkakhanta.  
‘CN<sub>i</sub> thinks that regular exercise is changing {a.her<sub>i</sub>/b. [\*the idiot]<sub>i</sub> }.’ [Group C, attitude]

**2.2.2. Empathy and sibling test** – The second subtype of logophoric center hypothesized to license exempt *caki-casin* in non-attitude contexts is empathy loci, which are event participants with whom the speaker identifies (cf. Kuno 1987). We made the antecedents of *caki-casin* in group B empathy loci using a new test, which we dub the sibling test. Korean encodes empathy information lexically with the four terms it has for older siblings: specifically, the term used identifies the gender of the empathy locus (see table). If *caki-casin* is replaced with the term *nwuna* (‘sister’, empathy locus male), it can refer to the antecedent’s sister only if it is an empathy locus; otherwise, it

gender of empathy locus	term for brother	term for sister
male	<i>hyeng</i>	<i>nwuna</i>
female	<i>oppa</i>	<i>enni</i>

has to refer to the sister or an older female friend of a male speaker. That the term *nwuna* requires the speaker be male in (6) but not in (5) shows that sentences like (5) involving the subject noun *thoughts* make the antecedent an empathy locus, which licenses *caki-casin*, while subject nouns like *bike* in (6) do not. Furthermore, the epithet test crucially fails in (5-6), i.e. *ku papo* can refer to the antecedent. This demonstrates that empathy loci and attitude holders are two different types of logophoric centers, each exempting the anaphor *caki-casin* from Condition A.

- (5) **Kangwu<sub>i</sub>**-uy sayngkak-un {a. cakicasin<sub>i</sub>-ul/b. *nwuna*-ul/c. [ku papo]<sub>i</sub>} wihem-ey ppattulyessta.  
‘KW<sub>i</sub>’s thoughts put {a. him<sub>i</sub>/b. KW/speaker’s sister/c. [the idiot]<sub>i</sub>} in danger.’ [B, empathy]  
(6) **Kangwu<sub>i</sub>**-uy cacenke-nun {a. \*cakicasin<sub>i</sub>-ul/b. *nwuna*-ul/c. [ku papo]<sub>i</sub>} wihem-ey ppattulyessta.  
‘KW<sub>i</sub>’s bike put {a.\*him<sub>i</sub>/b.\*KW/speaker’s sister/c.[the idiot]<sub>i</sub>} in danger.’ [B, not attitude/empathy]

**2.2.3. Results** – In attitude and empathy contexts, the ratings of *caki-casin* in Groups B and C were significantly higher ( $p < 0.0001$ ) than those of *cachey*. Also, there was a significant difference between non-empathy contexts like (6) and empathy contexts like (5) within Group B: the minimal pair in (5) and (6) showed a sharp contrast, with (5) being rated 5.057, and (6) 3.105.

anaphor \ antecedent	A: clausemate c-commanding	B: clausemate non c-commanding	C: non clausemate
<i>cachey</i>	4.7	2.5	3.3
<i>caki-casin</i>	4.8	non-empathy: 2.7; empathy: 3.7	attitude: 4.7

**3. Conclusion** – In sum, our studies show using specific tests that at least two types of logophoricity are syntactically relevant to exempting Korean *caki-casin* from Condition A; Korean is specifically interesting in providing a new precise test for the notion of empathy.

**Selected references:** Charnavel & Sportiche (to appear). Anaphor Binding - What French Inanimate Anaphors Show. *Linguistic Inquiry*.  
Kim & Yoon (2009). Long-distance bound local anaphors in Korean. *Lingua* 119.

## Inverse vocatives: the issue of reference and agreement mismatch

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**Overview:** In recent years, a substantial body of work has emerged articulating a layer of structure, above the CP, to encode properties of the Speech Act (e.g. Speas & Tenny 2003, Haegeman 2014, Wiltschko et al. 2015). Among other things, this layer has lent insight into the syntactic behavior of vocatives (e.g. Moro 2003, D' Hulst et al. 2007, Hill 2007, 2014, Haegeman 2014). Despite some differences regarding the application of the syntactic behavior of vocatives, the literature converges on one point about vocatives: A vocative phrase has been traditionally defined as an NP that refers to the addressee of an utterance (e.g. Zwicky 1974, Portner 2004, Hill 2007, 2014, Schaden 2010, Haegeman 2014, Haegeman & Hill 2013, a.o.). On the basis of the so-called *inverse vocatives* (1) and (2), found in several languages, e.g. Georgian (Abuladze & Ludden 2013), Arabic (Mohammad 2014), Turkish, this paper challenges the canonical view about the issue of reference in vocatives. Dealing with this topic, which to date has gone uninvestigated, the paper also provides an account for the phi-feature mismatches on these vocatives following Collins and Postal's (C&P, 2012) *imposter* analysis and Kratzer's (2009) *Feature Transmission* hypothesis.

(1) **Context:** The elder brother addresses his little sibling as follows.

<i>Abi-si,</i>	<i>ayakkabılar-ım-ı</i>	<i>getir-ir</i>	<i>mi-sin?</i>	(Turkish)
brother-3SG	shoes-1SG-ACC	fetch-AOR	Q-2SG	
Lit: 'His/her brother, can you fetch my shoes?' (from <i>İntihar</i> , a book)				

(2) **Context:** A patient addresses his/her doctor.

<i>Peki,</i>	<i>sana ne</i>	<i>de-meli,</i>	<i>doktor-cuğ-u?</i>	(Turkish)
well	you-DAT	say-should	doctor-DIM-3SG	
Lit: 'Well, his/her doctor, what about you?'				

In (1), the lexical item *abi* 'brother' refers to the speaker himself, not the addressee in the conversation, while the possessive agreement on the vocative comes from the hearer. In (2) however, *doctor* 'doctor' refers to the addressee and the possessive to the speaker. Therefore, these instances challenge the view that reference is always to the hearer. Such instances are widespread particularly in Turkish and usually express kinship or professional relations between the speaker and the hearer.

**Issues and Proposal:** Several questions arise from the data in (1) and (2). One could suspect that the possessive agreement might come not from the speech act participants, i.e. the speaker and the hearer, but from an external source (Martina Wiltschko, p.c.). The evidence against this comes from Sason Arabic (3).

(3) a. (mother addresses her son)

<i>imm-u,</i>	<i>ta</i>	<i>nihane!</i>
mother-3M	come.2M	here
Lit: 'His mother, come here!'		

b. (mother addresses her daughter)

<i>imm-a,</i>	<i>tey</i>	<i>nihane!</i>
mother-3F	come.2F	here
Lit: 'Her mother, come here!'		

Unlike Palestinian Arabic (Mohammad 2014, Kristen Brustad, p.c.) and Turkish, Sason Arabic shows gender agreement, in that it reflects the gender of the hearer, which strongly suggests that the possessive agreement is due to the speech act participants.

Another question is whether such instances can be treated simply as a shift of perspective or a matter of expressivity. That is, the speaker is taking the perspective of the hearer, which makes the vocative *annem* 'my mother' in (4) possible. However, if it was just a matter of shift of perspective, the prediction would be that (5) should be grammatical in the same scenario, only with multiple hearers, contrary to fact (see Podobryaev 2014 for a similar argument for imposters).

(4) **Context:** The mother addresses her son as follows.

<i>Anne-m,</i>	<i>kredi-ye</i>	<i>uygun</i>	<i>ev</i>	<i>var</i>	<i>di-yor-lar</i>	( <i>Leyla ile Mecnun</i> , TV show)
mother-1SG	loan-DAT	eligible	house	there	say-PROG-3PL	
Lit: 'My mother, they say there is a house eligible for loan.'						

(5) **Context:** The mother addresses her sons as follows.

* <i>Anne-miz</i>	kredi-ye	uygun	ev	var	di-yor-lar
mother-1PL	loan-DAT	eligible	house	there	say-PROG-3PL

The next question concerns the function of such vocatives. (6) shows that these vocatives can be used as both *call* vocative and *address* vocative in the sense of Zwicky (1974), Haegeman (2014). The former is ‘designated to catch the addressee’s attention’, while the latter is intended for a bonding relationship between the speaker and the hearer.

- (6) a. *hoca-sı*,                  nerde-sin?    (call)  
teacher-3SG                  where-2SG  
Lit: ‘His/her teacher, where are you?’  
  
b. Şimdi, *hoca-sı*              san-a                  bir şey                  söyle-yeceğ-im.                  (address)  
Now teacher-3SG      you-DAT              something              say-FUT-1SG  
Lit: ‘Now, his/her teacher, I will tell you something.’

**Proposal of reference:** Based on inverse vocatives, we argue for the dissociation of the vocative function from the ‘reference’ of the DP, and propose the structure in (7). This configuration proposes a layer above the vocative which determines the reference and phi-features of the vocative DP, in order to accommodate the data in various languages. This requires some modification to the feature complex attributed to the Voc° in the literature. Espinal (2013), for instance, proposes that the vocative head has a deictic feature and a 2nd person feature. This deictic feature in the vocative functional head will suffice to give the vocative interpretation. However, we dispense with the 2nd person feature, which automatically associates vocatives only with the addressee.

(7) [AUTHOR [ADDRESSEE [ VOCATIVE ] ] ]

We argue that denotation and  $\Phi$ -features are the results of separate operations and assume that the reference is the result of the indices relation established between the vocative DP and the antecedent higher in the structure, i.e. either **AUTHOR** or **ADDRESSEE** of C&P (2012), following the proposal of several researchers, e.g. Speas and Tenny 2003, Baker 2008, Miyagawa 2012.

**Proposal of phi-feature licensing:** Note that (1) and (4) show the same properties, in that the reference is to the speaker, but vary in the phi-features of the possessive, which does not correspond to any change in the truth value. This exemplifies the properties of *imposters* of C&P (2012). Regarding the licensing of these  $\Phi$ -features, we adopt *Feature Transmission* analysis (Heim 2008, Kratzer 2009), which posits that  $\Phi$ -features are percolated from a functional head, identified as  $v^\circ$ , but follow C&P (2012) in allowing different phi-features to be transmitted from multiple sources. We argue that this revised condition is necessary in order to explain cases such as (8).

(8) **Context:** A radio show hostess addresses her listeners.

Günaydın            *can-lar-ı*            umarım her şey            yolundadır.            Sizleri çok özledim.  
good morning        dear-PL-3SG        I hope everything        alright            you        a lot I missed  
Lit: ‘Good morning, *his/her dears*, hope everything is alright. I missed you a lot.’

In this scenario,  $\Phi$ -feature transmission takes place from different sources. The person feature percolates from the AUTHOR, i.e. speaker, while the number feature comes from the ADDRESSEE. Full application of these analyses to inverse vocatives will be presented.

**Conclusion:** This paper looks at *inverse vocatives*, from the perspectives of the reference of the vocative and the licensing of the phi-features on it. It suggests dissociation of the vocative function from the denotation of the DP, and shows that Collins and Postal’s *imposter* analysis has a larger empirical coverage and can be extended to account for such instances. It also provides another piece of evidence for the presence of the speech act participants.

## (Non)Clitic Status of Auxiliaries and A versus A-bar Head Movement

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**Introduction.** The canonical word order has always been VSO in the attested Old and Modern Romanian (OR & MR), with alternate word orders derived through movement of mainly subjects and objects to CP. The traditional wisdom is that, unlike most of Romance, which is SVO, Romanian displays the Balkan Sprachbund setting for word order. However, a careful look at the grammar of 16<sup>th</sup> century OR reveals occasional unexpected syntactic turns, unavailable to MR and puzzling for a Balkan VSO grammar; these are: (i) subject-Aux inversion (SAI), (ii) phrasal movement/scrambling within TP and not just to CP, and (iii) subject doubling with strong pronouns. Here, we argue that these properties are not random but specific to an earlier SVO parametric setting, active during the Romanization period and correlated to the non-clitic status of auxiliaries and to the change in the type of verb movement, from A to A-bar.

**Data.** (i) *SAI* is usually seen in SVO languages, where Aux-to-C leaves the preverbal subject in Spec,TP (Rizzi 1982). In OR, this inversion coincides with short *wh*-movement (1) or the presence of conditional operators (6).

(1) meargeți la Iosif și ce va el dzice voao aceaia faceți  
go.IMP.PL to Iosif and what will.3SG he say to.you that do.IMP.PL  
'go to Joseph and do what he tells you' (PO,145)

(ii) *Scrambling*. Constituents front within TP, between Aux and the verb. V is in the TP field as it precedes vP related adverbs and in situ subjects (for the latter see 2).

(2) așa se-au tare puternicit [v<sub>f</sub>foametea t<sub>v</sub> în pământul Canaanului]  
thus REFL=has strongly accrued hunger.the in land.the Canaan.the.GEN  
'thus the hunger strongly accrued in the lands of Canaan' (PO, 166)

(iii) *Doubled subjects*. This peculiarity shows a gradation: in 16<sup>th</sup> c. texts, the doubled subjects are *wh*-phrases/relative pronouns undergoing short *wh*-movement and yielding a correlative construction (3). In 18<sup>th</sup> c. texts, the correlative construction is phased out and the subject is left dislocated, but it is resumed by a strong pronoun (4). (Romanian lacks subject clitics).

(3) Carii rămănu în păcate de duhul svânt ei se rup  
who.the.PL remain.3PL in sins from spirit holy they REFL=break.3PL  
'Those who persist in their sins break away from the holy spirit' (FT 2 – Chivu 162)

(4) că darurile celealalte eale să numără între daruri cele mai slabe  
for gifts.the other they REFL=count.3 among gifts those more weak  
'for the other gifts count among the less important gifts' (SA 75 – Chivu 348)

**Analysis.** We assume evidence of verb movement within TP (e.g., to a Participle (Part) head as in Kayne 1989; see 2), throughout, and of non-clitic instantiations of auxiliaries in the above data. Notably, in 16<sup>th</sup> c. texts, the free and clitic treatment of auxiliaries can be seen in the same sentence, indicating variable parametric setting for the same speaker, despite clitic status as default (statistically shown in Dragomirescu 2014). We note that SAI arises in indirect interrogatives, conditionals and free relatives, indicating remnant V2 as in Rizzi (1996), but does not arise in declarative clauses, where Aux remains in T (it follows Neg). Crucially, Aux-to-C/Fin occurs to check the [modal] feature of Fin associated with [+qu] C/Force (on the identical feature content in C for conditional and interrogatives, see Kayne 1991, and conditional and free relatives, see Bhatt & Pancheva 2005). In declaratives, subjects typically precede Aux, and scrambling of other constituents may occur between Aux and V in Part. These observations amount to the configuration in (5), where two TP internal positions for constituent movement are visible: one in Spec,TP, for subjects; one in Spec,PartP for any other XP constituent.

(5) [<sub>CP</sub> [<sub>TP</sub> **Subject** [<sub>T</sub> **Aux** [<sub>PartP</sub> **XP** [<sub>Part</sub> **V** [<sub>VP</sub>...]]]]]

We propose that, in (5), *Spec,TP is an A-position, whereas Spec,PartP is an A'-position*.

Evidence comes from data showing that interrogatives/relatives allow for the merging of subjects between Aux and Part, but not of other constituents. This is unsurprising since A-movement does not interfere with A-bar movement. Scrambling, on the other hand, is found only in declarative clauses (there are no examples where fronting to contrastive focus co-occurs with scrambling), which points to interference with other operator-variable chains (e.g. *wh*-movement) and supports the A-bar nature of this movement. Conversely, the status of Spec,TP as an A-position is confirmed by the presence of bare quantifier subjects in SAI contexts (see 6).

(6) s-ară        neștine      grăi      cuvântul      Zeului      s-ară        neștine      sluji  
if=would.3   someone   speak   word.the   God.GEN   if=would.3   someone   toil  
'if someone would speak God's word, if someone would toil...' (Coresi L 171)

Furthermore, scrambling is phased out to the benefit of left dislocation to CP. The doubling of subjects in (3)-(4) shows a transition in the type of subject fronting for discourse purposes (from A- to A-bar movement), whereby the Topic/operator status of the subject (versus its preverbal A-position) is recognized only if a lower copy of the same item is spelled out in Spec,TP (A-position). Once the CP related analysis of the subject stabilizes, the doubling procedure becomes superfluous and the evidence for Spec,TP as an A-position is lost. Crucially, the generalization of the clitic auxiliary coincides with the generalization of VSO. *In fact, SAI, scrambling, and subject doubling all disappear as the clitic status of auxiliaries is fully stabilized*. Furthermore, the evidence presented here indicates a change in linearization from SVO (and *not* SOV) to VSO, with SOV order derived by scrambling to Spec,PartP and V in Part (versus V in situ).

**Implications and Conclusions.** First, this analysis explains why there are isolated cases of SVO in MR where Spec,TP is arguably an A-position. In derivations with bare quantifier subjects, as in (7) where the subject follows a Topic>Focus sequence, Motapanyane (1994) argues for A-status of Spec,TP as bare quantifiers cannot be doubled and analyzed as left dislocated to TopicP: (7) traces the older TP-internal SVO linearization option.

(7) [<sub>TOPP</sub>Noaptea], [<sub>FOCP</sub>în mod sigur]      cineva      se va      împiedica      de      scară.  
night.the                      in way certain      someone      REFL=will      stumble      on      stair  
'It is certain that during the night someone will stumble on the stairs.'

Second, this analysis entails that the setting for VSO does not arise from a parametric switch per se, but is an epiphenomenon of other changes in the grammar, notably, the cliticization of auxiliaries. The natural consequence of the changes discussed is that, in MR, contrastive topic or *wh*-movement precludes subjects in a preverbal A-position, indicating that the concurrent availability of an A and an A-bar preverbal position is lost. Lastly, perhaps the most interesting theoretical implication is that, *on par with phrasal movement, syntactic T to C movement is equally split into A- versus A-bar movement*. In particular, Aux to C/Fin (V2) is akin to an A-movement option (from T to C/Fin in OR), while Long Head Movement (LHM), as in Rivero (1993), where a participial/infinitival V moves to C to license an operator in OR - see (8) with a null interrogative operator - is an instance A-bar movement (i.e. Part to Focus movement).

(8) Grijit-au      bine      cetatea Hotinului      Vasilie-vodă?  
cared-has      well      fort.the Hotin.the.GEN      Vasilie-king  
'Did king Vasilie take good care of the Hotin fort?' (Costin 124)

In the same vein, Roberts (2001, 2010) defines locality of head movement based on head type: operator versus non-operator head. Further support for this claim comes from loss of T to C head movement for operator licensing in MR more generally.

## Two modes of dative Case assignment : evidence from the history of Greek

**1. Summary.** This paper provides evidence that morphological dative and genitive qualify as either lexical/prepositional or structural/dependent cases within and across languages, and in different stages of the same language. Specifically, we compare Classical Greek (CG) to Standard Modern Greek (SMG) and argue that CG datives and genitives bear lexical case assigned by overt or covert prepositions, while the SMG genitive, which has replaced the CG dative in ditransitives, is a dependent case in the VP-domain assigned by the configurational rule (1b) in opposition to a lower DP with dependent accusative or with nominative, a subcase of the general dependent case schema (1a) (Baker 2015: 111, 131):

(1) **a.** If XP bears c-command relationship Y to ZP in local domain WP, then assign case V to XP. **b.** If XP c-commands ZP in VP, then assign U (dative) to XP

**2. Background.** Baker & Vinokurova (B&V 2010) and Baker (2015) argue that structural morphological case is assigned either by a functional head to the closest NP via AGREE, as in Chomsky (2000, 2001), or by configurational rules that result from a calculation of whether there are case competitors in the same local domain as in (1a), adapting Marantz's (1991) *dependent case* proposal. An innovation of this theory is that it extends the scope of structural Case to dative, the status of which is notoriously controversial and has been treated as lexical or inherent (Woolford 2006), quirky (Zaenen et al. 1985), structural (Svenonius 2002, 2004) or as a mixed, structural or lexical/inherent/quirky, Case (Harley 1995, Rezac 2008, Alexiadou et al. 2014). Baker (2015) argues for the mixed case approach by investigating a sample of languages where Amharic, Burushaski, Shipibo and Diyari qualify as having lexical dative while Tamil, Greenlandic, Ingush and Chuckchi have structural/dependent dative.

**3. Datives and Genitives in CG.** There is ample evidence that dative and genitive in CG are lexical: a) *Simple active dyadic predicates* take objects in all three cases. Accusative is the most common one surfacing on themes undergoing a change of state or location and on non-affected themes. Traditional grammars list the verb-classes taking dative and genitive objects because they seem idiosyncratic, even though there are some semantic generalizations to be made (Luraghi 2010: 64-67). b) *Active ditransitive predicates* have four case arrays: **Acc – Acc; Dat – Acc; Gen – Acc; and Dat – Gen**. The Acc-Acc construction is found with verbs of *asking, teaching, reporting* among others. The Dat-Acc class is formed with verbs of *saying, ordering, giving, bringing* and with complex verbs prefixed with the prepositions *epi-* 'on', *en-* 'in', *sun-* 'with'. The Gen-Acc class includes verbs of *feeding, emptying, preventing, seizing, receiving* and *informing*. Finally, the rarest Dat-Gen class is found with *envy, transmit* and *concede*. Overall, *goals* surface as dative, while *sources* and *possessors* are genitive. Thus, dative and genitive are associated with specific semantic roles and are lexically determined by the selecting verbs. Following McFadden (2004) and Baker (2015) we propose that dative and genitive in CG are lexically governed cases assigned by overt or covert prepositions. The prepositional analysis receives strong support from the fact that complex verbs formed with the prepositions *en-* 'in', *sun-* 'with', *epi* 'on', inherit from them their dative assigning capacity yielding Dat-Acc ditransitives (Anagnostopoulou & Sevdali 2015). While with prefixal verbs dative is assigned by overt incorporated Ps, dative and genitive with monomorphemic verbs like *dido:mi* 'give', *lamvano* 'receive' are assigned by zero Ps.

**4. Genitives in SMG.** With the gradual loss of morphological dative from Greek (Humbert, 1930, Luraghi, 2003, Horrocks, 2006) ditransitives either generalized the Acc-Acc pattern in Northern Greek or generalized the Gen-Acc pattern in SMG, along with a prepositional construction. We will be concerned here with the SMG pattern shown in (2).

(2) O Jíanis      édose/eklepse/agorase      tis Marías/ s-ti Maria      ena vivlio

The John.nom gave/stole/bought.3.sg.act      the Mary.gen//to-the Mary      a book.acc

There are several reasons to treat the genitive in (2) as dependent case assigned in opposition to the structurally lower accusative, in accordance with (1b): **I** As shown in (2), IOs are assigned genitive regardless of their semantic role, i.e. whether they are goals (with 'give'),

sources (with ‘steal’) or beneficiaries (with ‘bought’). The genitive is neither idiosyncratically assigned nor linked to particular semantic roles in SMG, in contrast to CG. **II)** A handful of verbs (‘teach’, ‘pay’, ‘serve’) permit the Acc-Acc frame (3a), but crucially along with the regular Gen-Acc frame (3b). Note that the theme is optional in (3a) and obligatory in (3b):

- (3) a. Didaksa tin taksi (Aggliká) b. Didaksa tis Marias \*(Aggliká)  
 Taught.1sg the class.acc English.acc Taught.1sg the Mary.gen English.acc

We argue that (3b) has the same applicative syntax as the sentences in (2), and the IO receives dependent genitive. By contrast, the accusative goal in (3a), which may surface as a sole complement of the verb and can undergo argument externalization in adjectival passives (Levin & Rappaport 1986), as shown in (4), is the sole argument of the verbal root, and the optional theme in this construction is a modifier (Anagnostopoulou 2001, 2003):

- (4) a. I didagmeni taksi ‘The taught class’ b. O pliromenos pelatis ‘The paid customer

**III)** As expected from the dependent case approach, truly monadic predicates never take genitive arguments in SMG. When they are intransitive, experiencer verbs have nominative subjects, as in Sakha which has dependent dative (B&V 2010: 17, ex. (16)):

- (5) I Maria pinai/ krioni The Mary.nom hunger.3sg.act/cold.3sg.act ‘Mary is hungry/cold’.

In contrast, dyadic unaccusative verbs have a genitive experiencer (6a) or possessor (6b) in opposition to a lower nominative theme, falling under (1b):

- (6) a. Tu Petru tu aresi to vivlio  
 The Peter.gen cl.gen please.3sg the book.nom ‘Peter likes the book’  
 b. Tu Petru tu xriazete/lipi ena aftokinito  
 The Peter.gen cl.gen need.3sg/lack.3sg a car.nom ‘Peter needs/lacks a car’

**IV)** Virtually all monotransitive verbs that took genitive and dative objects in CG now have accusative objects, a fact suggesting that lexical dative and genitive almost disappeared from Greek. Very few active dyadic predicates take genitive objects in SMG (the verbs *milao* ‘talk’, *iper-ixio* ‘prevail’ *enantionome* ‘fight/object’), but all ditransitives do, an asymmetry that is easily explained under the dependent case approach and is mysterious otherwise.

**5. Passives in CG and SMG.** The proposed analysis has interesting implications for dative-nominative and genitive-nominative alternations in passives, which were available in CG, (7a) (Conti 1998, Anagnostopoulou & Sevdali 2015) and are no longer possible in SMG (7b):

- (7) a. All-o ti meiz-on **hum-eis** epitachthe:s-esthe [Act: **hum-in**.dat epitaks-ousin.act]  
 Something else-acc bigger-acc **you-nom** order-pass-pres-2 pl  
 ‘You will be ordered to do something else, bigger.’ (Thucydides, *Historia I*: 140,5)  
 b. \***I María** do-thike ena vivlio (apo ton Jiáni) [Act: din-o.act **tis Marias**.gen]  
 Mary.Nom gave.3.sg.pass a book.acc (by the John)

It is standardly assumed that structural Case alternates and lexical Case doesn’t. Contrary to the received wisdom, we argue, following B&V (2010) that the ungrammaticality of (7b) is the direct consequence of (1b). The presence of an active or passive phasal Voice head has no effect on the internal structure of the ApplP in (8) which is spelled out as soon as Voice is merged. Thus, the IO gets Gen in opposition to the DO, regardless of Voice ACT or PASS:

- (8) [<sub>VoiceP</sub> **Voice** (ACT/PASS) [<sub>ApplP</sub> IO Appl [<sub>VP</sub> DO V ]]] = **Spell-OUT domain**

On the other hand, Acc is assigned in opposition to a higher Nom at the CP phase and is sensitive to the presence vs. absence of an external argument (EA). Thus, the DO in (8) gets Acc when ACT Voice introduces an overt EA and Nom when PASS Voice doesn’t. We furthermore argue that the availability of Dat-Nom and Gen-Nom alternations in CG is the result of incorporation of the overt and covert prepositions (PI) introducing dative and genitive DPs into the selecting verbs, as a result of which DPs were allowed to escape the PP phase and undergo NP-movement (Alexiadou et al. 2014). The gradual loss of these alternations will be argued to correlate with a wider range of changes in the prepositional system of the language, from a weak satellite-framed language type with productive PI (Acedo Matellán 2010) to a verb-framed language-type with unproductive prefixes and no PI.

## Predicates of Personal Taste and *De Re* Construal

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Across the various treatments of the anchor for judgment in predicates of personal taste (PPTs), be it a parameter of the index of evaluation (Lasersohn 2005), null pronominals (Stephenson 2007), or generically bound elements (Moltmann 2002, Pearson 2012), one mainstay has been a focus on data where the PPT is in “main predicate position” (i.e., the main predicate of a clause, either embedded or not). As (1a) attests, conflicting PPTs in main predicate position seem to trigger a contradiction, suggesting that PPTs within a clause need to be evaluated from the same perspective, per Lasersohn (2005). And yet, (1b) shows that that when one of the PPTs is placed inside a nominal argument of the main predicate, it may select a distinct judge, as might be expected by Stephenson (2007).

- (1) Context: Mary says, “Sue loved the cake, but I hated it.”
- a. Sue: #Mary said that the dish was delicious and disgusting.
  - b. Sue: Mary said that the delicious dish was disgusting.

We argue here for the null hypothesis: judge-independence is the result of *de re* construal. Thus, *delicious* is amnestied from the same judge in (1b) because the DP is being read *de re*.

**The Facts** We argue that contradiction in (1b) is avoided only if the DP is read *de re*. (2) supplies a first argument. In (2a), Sue cannot be the judge of *beautiful* without her also committing to the item being a poncho; in sharp contrast, an overt pronominal co-referential with Sue does not require this commitment (2b). (Similarly, if she said *Mary thought a hunk was ugly* she is committed to evaluating the referent as a hunk.)

- (2) *Mary and Sue are debating several items of clothing in a catalog. They happen on an item that Sue believes is a beautiful dress and Mary an ugly poncho.*
- a. Sue: Mary thought that a beautiful<sup>Sue</sup> {#poncho, dress} was ugly.
  - b. Sue: Mary thought that a {poncho, dress} beautiful to me was ugly.

As a second argument, consider cases where *de re* construals of DPs have been argued to be impossible (3-4). Sharvit (2008) shows that Free Indirect Discourse blocks *de re* construal of DPs. In turn, as (3a) shows, the judge of the PPT *beautiful* can only be Mary, while an overt pronominal yields the unavailable judge:

- (3) a. Sue: A beautiful<sup>{\*Sue, Mary}</sup> item was on sale right now, she thought.  
b. Sue: An item beautiful to me was on sale right now, she thought.

Keshet (2008), building on Musan (1997), argues that the pivots of existential *there* sentences must be interpreted *de dicto*. Again, there is a contrast between whether Sue can be the judge with (4b) and without (4a) the pronominal.

- (4) a. Sue: Mary thought there was a beautiful<sup>{\*Sue, Mary}</sup> item on sale.  
b. Sue: Mary thought there was an item beautiful to me on sale.

PPTs in unembedded contexts show the ability to change the time of evaluation of judgment (5a). Musan's simultaneity constraint on existential pivots and codas thus predicts that a pivot is tied both to the attitude holder and the time of their attitude; (5b) confirms this.

- (5) a. When I was child, all dresses were ugly. Now they can be beautiful.  
 b. Once, when I was a baby, I believed there was a beautiful<sup>\*t@</sup> dress in my closet.  
 c. Once, when I was a baby, I believed a beautiful<sup>t@</sup> dress was in my closet.

**The Approach** The facts outlined in (2-5) suggest that the possible judges of a PPT correlate precisely with grammatically possible worlds and times of evaluation for predicates. This is unexpected if judges are, in principle, separable from an evaluation index, as is possible in many theories (Pearson 2012, Stephenson 2007, Saebo 2009). We assume a) that the judge is a component of the index of evaluation (Lasersohn 2005) and b) that evaluation indices are instantiated by situation variables in LF. Then the possible judges for a PPT are governed by general situation variable constraints:

- (6) a. The situation pronoun that a verb selects for must be coindexed with the nearest  $\lambda$  above it. (Percus 2000)  
 b. Two predicates composed via Predicate Modification may not be evaluated at different situations from one another. (Keshet 2008)

These constraints predict precisely the constellation of facts above. Consider the LF for (2a):

- (7)  $\lambda s_0$  Mary ... think [ $\lambda s_1$  T<sub>Past</sub> [<sub>DP</sub> a [ [ $s_k$  beautiful] [ $s_m$  poncho] ] ] [ $s_1$  be ugly].

(6a) requires that the situation variable for *ugly* is bound at the clausal level; with the assumption that the JUDGE( $s_1$ ) corresponds to the attitude holder (8a), *ugly* will be from Mary's perspective obligatorily. In turn, (6b) will require that  $s_k = s_m$ , meaning that *poncho* and *beautiful* are evaluated with respect to the same situation, matrix or not. Correspondingly, the world of evaluation for the nominal tracks the judge (and world, and time) of the PPT (8b).

- (8) a.  $[[\text{think}]]^c = \lambda s_s \lambda p \lambda x. 1 \text{ iff } \forall s' \in \text{Dox}(x,s) [p(s') = 1],$   
     if  $s' \in \text{Dox}(x,s)$ , then JUDGE( $s'$ ) =  $x'$ , the *de se* counterpart of  $x$  in  $s'$   
 b.  $[[\text{beautiful}]]^c = \lambda s_s \lambda x. 1 \text{ iff } x \text{ is beautiful to JUDGE}(s) \text{ in } s.$   
 c.  $[[\text{poncho}]]^c = \lambda s_s \lambda x. 1 \text{ iff } x \text{ is a poncho in } s.$

**Outlook** The analysis above raises several questions. One is whether all perspectival expressions show a similar *de re* effect. At least for epistemic adjectives, it appears that the answer is no; (9) is intelligible without committing Sue to there being vampires.

- (9) Sue: Mary is certain that two potential/possible [for  $x$ ] vampires aren't vampires.

But Sue does seem committed to Mary assessing some (possibly non-existent) group's epistemic state (DeRose 1991). We don't see a necessary *de re* effect here. It suggests that the mechanism tracking groups for group-relative expressions is distinct from that of PPT judges (which seem more grammatically constrained). More provocatively, the incorporation of PPT judges into situations raises the possibility that we can eliminate mention of judges entirely

from our theory, so that (8b) has no invocation of JUDGE *per se*. One suggestive piece of evidence for this is that (4a) can allow a non-Mary “judge” precisely in acentric cases — when the dress is (conventionally) beautiful in her doxastic situations, despite Mary not considering it beautiful herself. Important challenges loom for such an account (e.g., providing accounts for the faultlessness of PPT disagreement and the peculiar selectional requirements of embedders such as *find* discussed by Saebo (2009)), but it has the salutary promise of not simply deriving the contrast in (1), but making the fact that judges and worlds align all the more unremarkable.

**Introduction.** There is an ongoing debate in the literature as to whether Superlative Modifiers SMs like *at least* and *at most* are to be treated as degree constructions (Hackl 2000, Nouwen 2010, Penka 2014) or focus sensitive operators (Krifka 1999, Beck 2010, Coppock & Brochagen 2013). By looking at the properties of sentences with focus and SMs in a variety of languages, this paper makes a case for the focus sensitive approach. **Claim.** I show that SMs are focusing elements (Krifka 1999) whose Association With Focus (AWF) is Conventional, C-AWF (Beaver & Clark 2008; B&C henceforth). **Background I.** Superlative expressions are evaluated relative to a comparison class. Depending on how this comparison class is set, the sentence may give rise to ambiguity: Only (1a) has a “relative” reading where *John bought a cake for Mary larger than any other person did*, whereas only (1b) can mean that *John bought a larger cake for Mary than for anyone else*. The “absolute” reading that *John bought the largest relevant cake* is still present in (1a)/(1b).

(1) a. [John]<sub>F</sub> bought the largest cake for Mary      b. John bought the largest cake for [Mary]<sub>F</sub>  
This ambiguity can be captured as follows (Sharvit & Stateva 2002, Pancheva & Tomaszewicz 2012): (i) the “relative” readings obtain by constraining the content of the comparison class C (in (2)) by the focus association condition  $C \subseteq \cup C'$ , where  $C'$  is the free domain variable of the focus operator “~” (Rooth 1992). (This exemplifies a situation where focus serves to pragmatically resolve the anaphoric dependency of a quantifiers’ domain on the same context set as the focus operator “~”; von Stechow 1994.) And (ii), the “absolute” readings arise when the  $\llbracket -est \rrbracket$ ’s domain is resolved by the context. In B&C’s terms, this optionality bears the blueprint of Free Association With Focus (F-AWF).

(2)  $\llbracket -est \rrbracket = \lambda C_{\langle et \rangle} \lambda D_{\langle d, et \rangle} \lambda x_e. \exists d [D(d)(x) \wedge \forall y [y \in C \wedge y \neq x \rightarrow \neg (D(d)(y))]]$  [from Heim 2000]

**Background II.** SMs also associate with focus: This is signaled by the fact that the implicatures that come with SMs covary with the phrase that bears greater prosodic prominence.

- (3) a. The chair {*at least/at most*} invited [the postdoc]<sub>F</sub> to lunch  
     $\leadsto$  the speaker does not know whether {someone else/someone} was invited to lunch  
    b. The chair {*at least/at most*} invited the postdoc [to lunch]<sub>F</sub>  
     $\leadsto$  the speaker does not know whether the postdoc got invited to {something else/anything}

This is more evident in languages like Basque, where there is overt focus movement to a preverbal position (Irurtzun 2007): SMs only associate with elements that are left-adjacent to the verb, suggesting that what matters for interpreting SMs is not the syntactic position of the SM itself, but what phrase it associates with.

- (4) (gutxienez / gehienez) *Jon-ek* (gutxienez/gehienez) [*bi sagar*]<sub>F</sub> *jan zituen* (gutxienez/gehienez)  
at least at most JON-ERG two apple eat AUX.  
‘Jon ate {at least/at most} [two apples]<sub>F</sub>’

**Proposal.** SMs require phonological focus within their scope, and so focus association has to be lexically encoded (i.e., conventional), so that the domain variable of SMs cannot be contextually resolved (Rooth 1992; B&C). This makes SMs behave like *only* and unlike  $\llbracket -est \rrbracket$ , which patterns like quantificational adverbs (e.g., *always*) and shows F-AWF. SMs are interpreted as focusing adverbs that can combine with a variety of elements. Assume that for some constituent  $\alpha$  of type  $\langle \sigma, st \rangle$ , where  $\sigma$  is any type,  $\leq$  is a –possibly pragmatic– ordering of contextually salient alternatives, and  $\llbracket \alpha \rrbracket^f$  is the set of focus alternatives of  $\alpha$ :

- (5) a.  $\llbracket at\ least\ \alpha \rrbracket = \lambda \beta_{\langle \sigma \rangle} \lambda w_{\langle s \rangle} : \exists \gamma [\gamma \in \llbracket \alpha \rrbracket^f \wedge \alpha \leq \gamma \wedge \gamma(\beta)(w)]$   
    b.  $\llbracket at\ most\ \alpha \rrbracket = \lambda \beta_{\langle \sigma \rangle} \lambda w_{\langle s \rangle} : \forall \gamma [\gamma \in \llbracket \alpha \rrbracket^f \wedge \gamma(\beta)(w) \rightarrow \gamma \leq \alpha]$

The (simplified) lexical entries in (5) are interpreted compositionally in a Rooth-style analysis of focus (Rooth 1992, 1996), delivering an ordinary semantic value and a focus semantic value that consists of a set of alternatives (derivations shown in the paper). In what follows I present a number of arguments supporting that SMs are C-AWF. (Due to space constraints, sometimes I will only discuss *at least*, but the facts hold *mutatis mutandis* for *at most*.) **Argument I: No ambiguity** There is no such thing as an absolute reading of (3a)/(3b), meaning that the domain of SMs is restricted to elements in the set of focus alternatives, and cannot be pragmatically determined. **Argument II: Association with weak elements.** C-AWF expressions are sensitive to

prosodic prominence in their syntactic scope, and so they cannot associate with material lacking prosodic prominence (B&C). (7) shows that SMs can associate with prosodically independent pronouns like *them*, but not with their reduced forms, unlike quantificational adverbs and [–est]. Context: *You can see Mrs. Hudson, but do you see Sherlock and Watson?*

- (6) a. Context: *You can see Mrs. Hudson, but do you see Sherlock and Watson?*  
 b. Well, I *always/most often/least often* { see'em / see [them]<sub>F</sub> } F-AWF  
 c. I can *only/at least/at most* { \*see'em / see [them]<sub>F</sub> }. C-AWF

Thus, some meanings cannot obtain when C-AWFs target a weak form. Context: *You discussed a lot with Sandy. Of all the times you talked with her, how often were Fred and Sue the people you talked about?*

- (7) a. I *always* discussed'em      ~ *whenever I discussed someone with Sandy, I discussed Fred and Sue*  
 b. #I *only* discussed'em      ~ *I only discussed Fred and Sue (and no one else) with Sandy*  
 c. #I *at least* discussed'em      ~ *I discussed Fred and Sue (and maybe somebody else) with Sandy*  
 d. I discussed'em *the least*      ~ *I discussed Fred and Sue less often than anybody else*

**Argument III: Ellipsis.** In English, the elision of a VP containing the associate of an SM results in ungrammaticality. This is not so in the case of Free AWF. Context: *At the ceremony, some soldiers salute, others fire a round in the air, some do both and others do nothing. What do Kim and Sandy do?*

- (8) a. Kim *always* [salutes]<sub>F</sub> because Sandy always does  
       ~ *Kim salutes at every ceremony because Sandy salutes at every ceremony*  
 b. \*Kim {i. *only* / ii. *at least*} [salutes]<sub>F</sub> because Sandy {i. *only* / ii. *at least*} does  
    i. ~ *Kim salutes and does nothing else at every ceremony because Sandy only ever salutes*  
    ii. ~ *Kim salutes and maybe fires at every ceremony because Sandy salutes and maybe fires*

Moreover, even those cases that have been reported to be good for *only* show a contrast with SMs (B&C,p180):

- (9) a. I think Mary never feeds [bones]<sub>F</sub> to Fido  
 b. Whaddya mean? She might *only* have!      c. \*Whaddya mean? She might *at least* have!

**Argument IV: Backwards association.** Only a subset of the elements that are C-AWF (e.g., *even*) can associate with a phrase they do not c-command. SMs cannot either: they pattern with *only* in that they cannot associate with elements that are not to their left on the surface (Jackendoff 1972; Erlewine 2014).

- (10) a. [Bill]<sub>F</sub> will *even* pass the exam.  
 b. \*[Bill]<sub>F</sub> will {*only/at least/at most*} pass the exam.  
 (11) a. [Mary]<sub>F</sub>, Bill *even* met \_\_\_ at the party. ~ *Even Bill...*  
 b. \*[Mary]<sub>F</sub>, Bill {*only/at least/at most*} met \_\_\_ at the party. ~ *MOD Bill...*

**Argument V: Intervention effects.** A focus operator occurring above an alternative generating element blocks its interpretation by higher operators (Beck 2006, a.m.o.). For SMs, the prediction is borne out in *wh*-in-situ languages like Hindi: A *wh*-phrase that stays in-situ cannot be c-commanded by a focussing element, but overtly moving the *wh*-element past the focus element dismantles the intervening configuration.

- (12) a. \*{kam se kam / zyaadaa se zyaadaa} saakshii-ne kya chiiz khariid-ii? [Hindi]  
       at least            at most            Sakshi-ERG what thing buy-PFV  
       Intended: 'What did *at least* / *at most* Sakshi buy?'  
 b. [kya chiz] {kam se kam / zyaadaa se zyaadaa} saakshii-ne \_\_\_ khariid-ii?  
 c. hameshaa saakshii kya chiiz khariid-te hain?  
       always      Sakshi    what thing buy-IMPV PRES  
       'What does Sakshi always buy?'

**Conclusions.** I defend that SMs not only *may* but in fact *need* to Associate With Focus (C-AWF). Consequently, SMs are not to be treated as degree quantifiers (Hackl 2000 a.o.), but as elements whose focus sensitivity is lexically encoded and therefore fulfill a pragmatic task (Rooth 1992, B&C). Other superlative expressions ([–est]) *may* but *need not* Associate With Focus (F-AWF). If so, the facts presented above follow naturally. Moreover, this fits nicely with recent accounts of the implicatures of SM's (Coppock & Brochagen 2013; Mendia 2015). In the paper I provide evidence of SMs as C-AWF in a variety of unrelated languages.

## A feature-based approach to Doubly Filled Comp effects

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My talk presents a feature-based analysis of Doubly Filled Comp structures in embedded interrogative clauses and in relative clauses, with a special focus on German. I argue that cartographic approaches (e.g. Baltin 2010) do not offer an explanatory account for the phenomenon by postulating that there is necessarily a split CP with distinct designated layers for diverse functions, following the template developed by Rizzi (1997). Instead, I propose that the size of the CP-periphery is flexible, and is defined by the availability of overt lexical items that can encode certain clause-typing features. In particular, I assume that operator movement targets the lowest possible CP, in line with the Minimal Link Condition of Chomsky (1995), and the necessity/impossibility of filling the head of the same CP can be explained in a principled way by taking independent language-specific (or dialect-specific) properties into consideration.

The Doubly Filled Comp pattern (in interrogatives) is illustrated for Bavarian in (1):

- (1) I frog-me, **fia** **wos** **dass-ma** an zwoatn Fernseher braucht.  
I ask-REFL for what that-one a second TV needs  
'I wonder what one needs a second TV for.' (Bayer and Brandner 2008: 88, ex. 3)

The effect stems from the co-occurrence of the complex *wh*-phrase *fia wos* 'for what' and the general finite subordinating complementiser *dass* 'that'. Two possible representations are given in (2), where (2b) represents a single CP, in line with the flexible feature-based approach proposed here and the analysis given by Bayer and Brandner (2008), and (2a) represents a cartographic approach with a functionally split CP (as in Baltin 2010):

- (2) a. [CP **fia wos** [C' **dass** ...]]  
b. [CP **fia wos** [C' Ø [CP [C' **dass** ...]]]]

Under the analysis in (2b), it is assumed that the two CPs denote two distinct subtypes of CP, one specifically hosting *wh*-elements (FocP or IntP), and one hosting a finite subordinator (FinP). This is supposed to explain why the *wh*-element targets a higher CP (rather than the lowest one): it moves to a designated position encoding [wh]. However, such an analysis faces a number of problems. First, the postulation of designated layers while maintaining that all of them are subtypes of CP is problematic in terms of selectional restrictions, as not all of the possible projections are claimed to be present in all structures, while the cartographic template does not offer an immediate link to the particular semantic properties of individual constructions. While a 'collapse' of the CP-layer is assumed by Rizzi (1997), too, the non-separation of designated CPs immediately raises the problem of the *wh*-operator not moving to the lowest [Spec,CP], and hence violating the Minimal Link Condition. Second, the analysis in (2b) cannot explain why the lower C head is not filled in other varieties of German in constructions like (1), and generally, in languages/dialects prohibiting Doubly Filled Comp, since the Fin head should be available in other finite embedded interrogatives, too. Third, if (2b) were the structure underlying (1), it would be left unexplained why speakers of the same dialects regularly do not accept doubly filled Comp patterns with word-sized *wh*-elements, such as *wer* 'who.NOM', as described by Bayer and Brandner (2008).

To avoid these problems, I propose an analysis represented by (2a). I assume that the relevant C head is equipped with the feature [wh], which is checked off by the operator moving to the specifier. Further, as the complement of the matrix predicate, the C head is specified as a finite subordinate clause, conveniently represented here as [sub]. The insertion of the head *dass* is due to a phonological requirement, in that the subject pronoun cliticises onto an element in C (cf. Bayer and Brandner 2008). The inserted lexical item has to match the specification [sub],

but it is not specified for [wh], as the insertion of a [wh] head would check off the [wh] feature on C, and the movement of the *wh*-element would not be triggered. As the complementiser is inserted because of the requirement from the subject, it follows naturally that an overt *dass* or *that* is not observed with sluiced remnants; hence one does not have to hypothesise that *dass* heads a lower CP. On the other hand, if the *wh*-pronoun is head-sized, in certain dialects it may target C and not [Spec,CP], see Bayer and Brandner (2008), and hence *dass* does not have to be inserted: the subject can cliticise onto the *wh*-element in C. If, however, one were to adopt the structure in (2b), there would be no explanation for why certain *wh*-elements prohibit *dass*-insertion.

The Doubly Filled Comp pattern in relative clauses is illustrated in (3) for South German (Alemannic, Bavarian):

- (3) ... der Mann, (**der**) wo seine Schu verlora hot  
the man REL.PRONOUN REL.PART his shoes lost has  
‘the man who has lost his shoes’ (Brandner & Bräuning 2013: 132, ex. 2)

The candidate structural representations would be similar to the ones in (2), with the optional relative pronoun *der* in a specifier position, and the relative head *wo* in a C. Since both of these overt elements encode the relative property of the clause, a cartographic representation in the vein of (2b) is highly problematic, as postulating two relative CPs is not in line with the idea of a one-to-one match between distinct positions and distinct functions. Given this, the movement of the operator to a higher CP is clearly a violation of the Minimal Link Condition. While English uses *that* in both constructions like (1) and (3), the functional difference between the two kinds of complementiser is clearly shown by (Southern) German, where the general subordinator *dass* is used in embedded interrogatives (with an obligatory *wh*-element), and the relative complementiser *wo* in relatives (with an optional relative pronoun).

Again, I propose an alternative, feature-based account, and a representation similar to (2a). The C head is equipped with the feature [rel], which can be checked off either by an operator in [Spec,CP], or by inserting a [rel] head into the C head. Contrary to (1), where only the operator was equipped with the feature [wh], in relative clauses I assume that both *wo* (or *that*) and the operator are [rel]: these varieties have the relative complementiser as the default relative clause formation strategy, and the insertion of an overt operator is an instance of reinforcement (cf. Van Gelderen 2009). The movement of the operator is triggered because the [rel] feature is uninterpretable on the operator itself (no “relative in situ”), irrespective of whether the C head is filled: [rel] always comes with [EDGE]. Doubly Filled Comp effects can hence be analysed as instances of a minimal CP, in line with the assumption that movement targets the lowest CP, and the relevant features are responsible for the presence/absence of true doubling patterns. It is predicted that a further CP is generated only if certain features cannot be lexicalised by the elements in a single CP: this will be shown for comparative clauses in several languages, showing C head + operator, or C head + C head orders.

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## Bagel Problem Items in Telugu and Tamil

**CONTRIBUTIONS:** We first establish that a bagel pattern of distribution is found for a polarity item *wh-ainaa* & *wh-aavate*, in two of the Dravidian languages, Telugu & Tamil respectively (we use Telugu data to illustrate in this abstract) that cannot be accounted for by either of the two major lines of attack for the bagel problem –a complementary distribution explanation, or a bipolar feature type account. We then show that a compositional semantic analysis, decomposing the item into an indeterminate pronoun and a concessive scalar additive particle, itself a complex of two operators, and interaction of the two operators with other propositional operators, plus competition with another scalar particle based NPI, derives the right distribution.

**BAGEL DISTRIBUTION:** *wh-ainaa* is formed by adding the suffix *-ainaa* to interrogative pronouns. A *wh-ainaa* item cannot occur in a positive episodic sentence, or in an anti-morphic context. It can occur in a downward entailing context, and in non-veridical imperative and modal contexts (including future). This is a bagel pattern of distribution (Pereltsvaig 2000).

**NOT COMPLEMENTARY DISTRIBUTION:** One prominent explanation for the bagel distribution is a morphological blocking analysis based on strict complementary distribution (Pereltsvaig 2004). Such an account at first seems viable in the Dravidian context as well, because there is another NPI *wh-um* or *wh-VV*, in Tamil & Telugu respectively, that occurs in more restricted negative contexts. The only context where a *wh-um* item is licensed is under clausemate negation –an AM context –precisely the context where the *wh-ainaa* item is banned. So it looks like NPI *wh-um* and NPI/FCI *wh-ainaa* are in complementary distribution, and an ‘elsewhere’ condition might account for their distribution. However, in one kind of context, both *wh-um* and *wh-ainaa* are permitted, thus breaking the complementary distribution pattern observed so far (1)-(2).

- |   |   |
|---|---|
| (1) evar-uu leeka-poo-tee raanu<br>who-VV be.not-go-if come.not<br>‘(I) won’t come if there isn’t anybody.’ | (2) evar-ainaa leeka-poo-tee raanu<br>who-ainaa be.not-go-if come.not<br>‘(I) won’t come if there isn’t anybody.’ |
|---|---|

**AGAINST A BIPOLAR ANALYSIS:** *wh-ainaa* can be analysed as a bipolar element (van der Wouden 1997) –a superweak NPI that is licensed in non-veridical contexts and simultaneously a weak PPI, due to which it is anti-licensed in AM contexts. In support, it would seem that its PPI nature comes through in the special conditions under which it can occur under negation, symptomatic of PPI-hood (Szabolcsi 2004) –scoping under metalinguistic negation; Shielding by an intervening operator (3); Locality (4); and, Rescuing (5).

- |   |  |
|---|--|
| (3) PRATI SAARII eed-ainaa tina-leedu<br>every time what-ainaa ate-not<br>‘I didn’t eat something EVERYTIME.’   | (4) eed-ainaa konnaanu ani ana-leedu<br>what-ainaa bought that said-not<br>‘I did not say that I bought anything.’ |
| (5) eed-ainaa tina-kunDaa vast-ee nannu tirigi pampinceevaaru<br>what-ainaa eat-not come-if me return send<br>‘If I came without eating anything, they used to send me back.’ |  |

But how to ground a bi-polar item in the meaning/structure is unclear. Can both + and – polarity be primitives? This again seems a distributional rather than a grammatical explanation.

**SEMANTIC DECOMPOSITION:** *wh-ainaa* is built from an indefinite (the *wh-* word), and *ainaa*, the concessive form of *-aw* ‘to become’, a concessive scalar additive particle (CSAP). CSAPs like *aunque sea* in Spanish (Lahiri 2010) and *magari* in Slovenian (Crnic 2011) are known to have a restricted distribution –in DE and modal environments and banned from positive episodic and clausemate negation contexts. However CSAP *-ainaa* can occur in clausemate negation contexts with low-on-scale elements, and the distribution doesn’t match perfectly with *wh-ainaa*.

We adapt Lahiri (2010) and Crnic (2011) for the semantics of *-ainaa*. *-ainaa* has two focus-sensitive scalar operators in it: *EVEN* & *SOLO*. *SOLO* is also a weak existential quantifier. They associate with the same focussed element. *EVEN* triggers the scalar presupposition that its preja-

cent is less likely than a relevant alternative. *SOLO* triggers the scalar presupposition that its pre-jacent is more likely than a relevant alternative. These are two conflicting conditions and only those contexts that can somehow make both of them consistent allow for an element marked with *-ainaa* to survive. Positive episodic contexts are bad with both high-end & low-end of scale (6). *DE* contexts are good because *EVEN* can scope over the operator (7). *Y/N-Q* are also good (following Guerzoni (2004) for *Y/N-Op*) with a negative bias (8).

- (6) a. # [EVEN C<sub>1</sub>] [SOLO C<sub>0</sub>][Ramu read one<sub>F</sub> book]  
b. # [EVEN C<sub>1</sub>] [SOLO C<sub>0</sub>][Ramu read ten<sub>F</sub> books]
- (7) a. [EVEN C<sub>1</sub>] **OP<sub>DE</sub>** [~~EVEN C<sub>1</sub>~~] [SOLO C<sub>0</sub>][Ramu read one<sub>F</sub> book]  
b. [EVEN C<sub>1</sub>] [**IF** [SOLO C<sub>0</sub>][Ramu read one<sub>F</sub> book]he passes]  
c. [EVEN C<sub>1</sub>] [**¬** [SOLO C<sub>0</sub>][Ramu read one<sub>F</sub> book]]
- (8) a. [WHETHER<sub>i</sub> [EVEN C<sub>1</sub>] **t<sub>i</sub>** [~~EVEN C<sub>1</sub>~~] [SOLO C<sub>0</sub>][Ramu read one<sub>F</sub> book]]  
b. [WHETHER] =  $\lambda p.p, \lambda p\neg p$   
c. [EVEN C<sub>1</sub>] [SOLO C<sub>0</sub>][Ramu read one<sub>F</sub> book]  
[EVEN C<sub>1</sub>] [**¬** [SOLO C<sub>0</sub>][Ramu read one<sub>F</sub> book]]

We take the *wh*-indefinites that compose with *-ainaa* to be indeterminate pronouns, following Kratzer & Shimoyama (2002). They introduce a set of individual alternatives. The alternatives grow and are quantified by the closest quantificational operator. Here *SOLO* is the closest operator and it forces the low-end of the scale to be selected among the alternatives. So under negation, the derivation should go through just as in (7c). But it is ungrammatical. This is due to blocking by the other NPI forming scalar particle *-um*, that competes here (9).

- (9) a. *-um* = [EVEN][SOLO]<sub>[uNEG]</sub> R ee-pustakam-um cadavaledu ‘R didn’t read any book.’  
b. [EVEN C<sub>1</sub>] [**NEG** [SOLO C<sub>0</sub>]<sub>[uNEG]</sub>][Ramu read one<sub>F</sub> book] ]  
c. [EVEN C<sub>1</sub>] [**¬** [SOLO C<sub>0</sub>][Ramu read one<sub>F</sub> book] ]

Then what about contexts where *wh-um* and *wh-ainaa* are not complementary: contexts which have negation and another operator? Here free choice comes in; these contexts are analysed as having an exhaustification operator that associates with the domain of the existential quantifier *SOLO* and that is inserted above the imperative operator (10).

- (10) a. Imperative: ee-pustakam ainaa caduvu! ‘Read any book!’  
b. [EVEN C<sub>2</sub> [**EXH** C<sub>1</sub> [**IMP** [SOLO C<sub>0</sub>][read one<sub>F</sub> book]]

In imperative + negation contexts, *SOLO* has to move past **¬** to make its context available to the *EXH* operator generated above *IMP* (11). The *SOLO* of *-um* has a <sub>[uNEG]</sub> feature preventing it from moving past **¬** (12). This *SOLO* stays in-situ below **¬**, *EXH* is not generated, and there is no free choice reading. (11) & (12) are no longer comparable structures. Blocking can’t happen.

- (11) a. Imperative+Neg with *-ainaa*: ee-pustakam ainaa cadavaddu! ‘Don’t read any book!’  
b. [EVEN C<sub>2</sub> [**EXH** C<sub>1</sub> [**IMP** [~~SOLO C<sub>0</sub>~~][**¬** [SOLO C<sub>0</sub>][read one<sub>F</sub> book]]]]
- (12) a. Imperative+Neg with *-um*: ee-pustakam-uu cadavaddu! ‘Don’t read any book!’  
b. [EVEN C<sub>1</sub> [**IMP** [**¬** [SOLO C<sub>0</sub>]<sub>[uNEG]</sub>][read one<sub>F</sub> book]]]

Our analysis is summarized in (13), showing how we derive the distribution of *wh-ainaa*.

(13)

Tamil/Telugu	<i>wh-um</i>	<i>wh-ainaa</i>	Analysis
Only propositional $\exists$	–	–	[EVEN] presupposition violated
[Neg] alone	+	–	<i>-um</i> blocks <i>-ainaa</i>
[Neg] + another Op	+	+	<i>-ainaa</i> ’s [SOLO] in different configuration
Intensional	–	+	[EXH] allows [EVEN] presupposition
Conditional	–	+	[EVEN] over IF
Episodic <i>Y/N-Q</i>	–	+	[EVEN] over <b>¬</b>

## *A unified analysis of Negative Concord*

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Traditionally, Negative Concord Languages (NCLs) have been grouped into two classes which differ with respect to the distribution of the negative marker (NM). In *strict NCLs* (Czech, (1)), the NM is obligatory, while it can/must be omitted in designated contexts in *non-strict NCLs*. (Italian, (2); NM marked boldface, n[egative]-words in italics):

- (1) *Nikdo* **ne**volá. (2) *Nessuno* ha telefonato.  
nobody NM-calling/‘Nobody is calling.’ ‘Nobody has called.’

In contrast to extant analyses, which take the distinction to reflect a parametric choice in the feature specification of NMs, I present new evidence suggesting that (i) variation is due to the internal composition of n-words and that, as a consequence, (ii) there is no discrete distinction between strict and non-strict NCLs. An implementation in terms of a bi-lexical system is presented which formalizes semantic and morphosyntactic properties of negative elements.

**1. Background.** Zeijlstra (2004) treats NCs as a (multiple) downward licensing configuration in which [uNEG] enters *Agree* with [iNEG]. Specifically, all n-words bear [uNEG], while (some) NMs as well as silent negative operators (OP) are assigned [iNEG]. Crucially, the interpretation of negation is determined by its overt position and the [NEG] feature is semantic in nature (but see Zeijlstra 2014). For the strict NC-example (1), this results in the parse (3), where [iNEG] on OP agrees with two [uNEG]-features on the NM and the n-word:

- (3) [<sub>NegP</sub> OP<sub>[iNEG]</sub> [<sub>TP/vP</sub> *nikdo*<sub>[uNEG]</sub> **ne**<sub>[uNEG]</sub> volá]]

In non-strict NCLs, a NM with [iNEG] checks [uNEG] on postverbal n-words, but not preverbal ones, as the n-word would c-command the NM; thus, these contexts include an OP.

**2. New evidence.** Greek is considered a typical strict NCL (Giannakidou 1998), as it requires the presence of the NM both with pre- and postverbal elements:

- (4) a. *Pote* **\*(dhen)** irthe. b. **\*(Dhen)** irthe *pote*.  
never NM came NM came never/‘(S)he never came.’

However, there is an underdiscussed class of elements (*ou*-words) which display non-strict NC behavior in that preverbal occurrences of *ou*-words block NMs (see also Surányi 2006 for Hungarian).

- (5) a. *Oudhepote* **\*(dhen)** irthe. b. **\*(Dhen)** irthe *oudhepote*.  
never NM came NM came never/‘(S)he never came.’

Both the inability of the NM to intrude in (5a), and its obligatoriness in (4a) remain unaccounted for under Zeijlstra's (2004) analysis: in (5a), NM is incorrectly predicted to be optional, because it does not act as a licenser. In addition, it has been noted that the presence of a NM in (4a) is unmotivated (Penka 2011). Third, the fact that *ou*-elements license *negative spread*, in which the negative feature is distributed among any number of indefinite expressions without there being a NM (den Besten 1986) is left unexplained:

- (6) a. *Oudhepote* rotise *tipota* b. *\*Pote* rotise *tipota*  
never asked nothing never asked nothing/‘(S)he never asked anything.’

Fourth, the assumption that NMs differ in their feature specification is problematic, as seen by the interaction of negation with quantifiers. In structures like (7), NMs with [iNEG] are expected to receive a narrow scope reading, while NMs with [uNEG] should be assigned wide scope, due to the obligatory presence of matrix scope OP (Zeijlstra 2004). Experimental facts (Baltazani 2002), as well as elicited data from Romanian, Italian and Spanish contradict this claim. In addition, (7) also demonstrates that semantic negation is dissociated from the clause initial empty negative operator.

- (7) *Polla provlimata* **dhen** elisan. (Baltazani 2002: 112)  
many problems NM solved  
‘The problems they solved are not many.’/‘The problems they didn’t solve are many.’

Fifth, the assumption that a single language may assign NMs either [iNEG] or [uNEG] incorrectly

predicts differences in the distribution of n-words, contrary to fact. The subjunctive NM *min*, argued to bear [iNEG] in Zeijlstra (2006) does not surface in (8a) with an *ou*-element, yet obligatory with regular n-words (8b).

- (8) a. *Oudepote* na zitis ti gnomi tu!  
never NM subj ask the opinion his  
'You should never ask his opinion!'  
b. *Pote* na **\*(min<sub>[iNEG]</sub>)** zitis ti gnomi tu!  
never subj NM ask the opinion his

Finally, *asymmetric* systems in which an [iNEG] feature that itself does not need to be licensed legitimizes the presence of [uNEG], generate unfulfilled expectations. (5a) demonstrates that in such a system, [iNEG] on a negative OP licenses [uNEG] on the n-word. Moreover, the n-word in (5b) is lower than its counterpart in (5a). But given these two observations, it follows that the asymmetric system cannot exclude (5b), which minimally differs from (5a) only in word order.

**3. Proposal.** I propose that a *symmetric* system which relates the distribution of n-words to their lexical composition, more precisely their morphosyntactic properties, derives all of the above data. In a symmetric system, two features enter into a bi-directional licensing relation, similarly to phi-checking on T and case licensing on nominative DPs (Chomsky 2000). The key observation concerning *ou*-elements in Greek is that they are morphologically negative, unlike other n-words in the language. I submit that elements in the negative system come with two features, one semantic ([i/uNEG]), and one morphosyntactic ([i/uMORPH]) in nature. [iNEG] introduces a semantic negative operator, while its [uNEG] version is semantically inert. Syntactically, [iNEG] is always introduced by a covert semantic OP located in SpecNegP (evidence for this parse comes from *Negative Split*). Its function is to value [uNEG] on n-words and NMs. In addition, OP bears a morphosyntactic [uMORPH] feature, which needs to be licensed by [iMORPH] on elements with transparent morphological negation (*ou*-words or NMs). [iMORPH] is not interpreted at LF but participates in syntactic operations by triggering movement of *ou*-words into the preverbal field. Elements with [uMORPH] are syntactically inert, and do not partake in dislocation. The typology of the formatives is as in (9).

- (9) a. overt NM: [uNEG, iMORPH]  
b. covert operator: [iNEG, uMORPH]  
c. n-words with morphologically transparent negation: [uNEG, iMORPH]  
d. n-words: [uNEG, uMORPH]

In conjunction with the assumption that verbs pick up the clitic NM on its way to T°, the system correctly discriminates between (5a) and (5b). In (5b), [uNEG] on *dhen* and the *ou*-word are valued by [iNEG] on OP prior to movement (see (10a)), while *dhen* licenses [uMORPH] on OP once the verb and *dhen* have raised to T (see 10b):

- (10) a. [<sub>NegP</sub> OP<sub>[iNEG, uMORPH]</sub> **dhen**<sub>[uNEG, iMORPH]</sub> irthe *oudhepote*<sub>[uNEG, iMORPH]</sub>] ⇒  
b. [<sub>TP</sub> **dhen**<sub>[uNEG, iMORPH]</sub> irthe [<sub>NegP</sub> OP<sub>[iNEG, uMORPH]</sub> *oudhepote*<sub>[uNEG, iMORPH]</sub>]]

In (5a), [uNEG] on *oudhepote* is licensed by OP prior to movement (see (11a)) and [uMORPH] on OP is valued by *oudhepote* after it has moved to the preverbal field (see (11b)). *dhen* is not required, hence excluded by economy:

- (11) a. [<sub>NegP</sub> OP<sub>[iNEG, uMORPH]</sub> [<sub>NegP</sub> OP<sub>[iNEG, uMORPH]</sub> irthe] *oudhepote*<sub>[uNEG, iMORPH]</sub>] ⇒  
b. *Oudhepote*<sub>[uNEG, iMORPH]</sub> [<sub>NegP</sub> OP<sub>[iNEG, uMORPH]</sub> [<sub>NegP</sub> OP<sub>[iNEG, uMORPH]</sub> irthe]]

A similar account extends to (6a). The *ou*-element with morphosyntactic [iMORPH] values the [uMORPH] features of the OP and *tipota*; the NM is correctly predicted to be absent. Finally, in (4a), [uNEG, uMORPH] on *pote* is derivationally licensed prior to movement by [iNEG] on OP and [iMORPH] on the NM *dhen* (see (12)). Thus, the NM is obligatory.

- (12) *Pote*<sub>[uNEG, uMORPH]</sub> [<sub>NegP</sub> OP<sub>[iNEG, uMORPH]</sub> **\*(dhen**<sub>[uNEG, iMORPH]</sub>) [*pote*<sub>[uNEG, uMORPH]</sub> irthe]]

Under this account, [uNEG] on NMs and n-words is always licensed prior to movement, while [uMORPH] on OP is always licensed after movement. There is no need to stipulate a high NegP for languages with NMs (contra Zanuttini 1997 and others). On the present view, NegP is always low and the high occurrence of NMs is an artifact of verb movement, which collects the clitic NMs on its way to T or Mood.

# Why the Historical Present is not the Mirror Image of Free Indirect Discourse

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While Schlenker (2004) argues that the Historical Present and Free Indirect Discourse are each other's mirror images, this paper shows that the perspective shifts involved are of a fundamentally different nature.

**Two contexts** Schlenker (2004) introduces the distinction between two contexts, a context of thought and a context of utterance, to explain the grammaticality of the following two sentences:

- (1) Tomorrow was Monday, Monday, the beginning of another school week!
- (2) Fifty eight years ago to this day, on January 22, 1944, just as the Americans are about to invade Europe, the Germans attack Vercors.

Example (1) is a sentence in Free Indirect Discourse (FID), a narratological technique in which we read the thoughts or utterances of a character in the story, but where these thoughts/utterances are not embedded under an attitude or speech verb that explicitly attributes them to this character. Example (2) features a Historical Present (HP), a present tense used to refer to events in the past, as witnessed by the past time adverbial.

In both sentences it is clear that the indexical expressions are not to be evaluated with respect to one and the same Kaplanian context. Both the combination of *tomorrow* and a past tense in (1) and that of *fifty eight years ago to this day* and a present tense in (2) would result in a clash. Schlenker argues that these data show that we have to distinguish two contexts, a context of thought ('the point at which a thought originates') and a context of utterance ('the point at which the thought is expressed'). He continues:

The difference rarely matters in everyday life: a person's mouth is located near a person's brain, and as a result the point at which a thought is formed is not significantly different from that at which it is expressed. If we were very different creatures, we might be able to have our brain in one location and to express its thoughts in another.

Schlenker (2004:279)

Although the difference doesn't come out in everyday life, Schlenker argues that the two literary devices mentioned above, FID and the HP, do tear the two contexts apart. Here the narrator presents things as if the context of thought is significantly different from the context of utterance. In these constructions, only one of the two contexts is the actual context of the narrator, the other is a non-actual context in the story.

In FID, Schlenker argues, following Banfield (1982) and Doron (1991), the context of utterance is the actual context, i.e. the context of the narrator, but the context of thought is the context of a character in the story. The felicity of (1) is then explained as follows: tenses and pronouns are variables and as such always anchored by the context of utterance. All other indexicals, by contrast, are anchored by the context of thought. For (1) this means that the time denoted by *tomorrow* is in the future for the character (the context of thought) but in the past for the narrator (the context of utterance), resolving any impending conflict.

While the FID part of Schlenker's account has received considerable attention (e.g. Sharvit 2008, Eckardt 2014,

Maier 2015), the HP component went somewhat unnoticed (with the recent exception of Eckardt 2014). Schlenker proposes to analyze the HP as the mirror image of FID: here it's the context of utterance that is a non-actual context (in the story), while the context of thought is the actual context. Indexical expressions still having the same anchoring, this means that the present tense in (2) is evaluated with respect to a non-actual context of utterance, while the temporal adverbial *fifty eight years ago to this day* is anchored by the context of thought, which here is the actual narrator's context. As in the case of FID, this then explains the felicity of (2).

Despite its elegance, I argue that the mirror image analysis cannot be correct. I identify seven problems, starting with more conceptual ones which will then be followed by more empirical ones. I then propose an alternative in which the two are treated as fundamentally different, a major difference being that, while FID is a report, sentences with the HP are not.

**Argument 1: HP and the two contexts** Although it is clear that HPs are to be interpreted with respect to a non-actual context, there is no *intuitive* reason for a constellation in which the context of *utterance* is shifted while the context of *thought* remains the actual context. Schlenker writes:

the explanation [for the felicity of (2)] is simply that the time of the Context of Utterance  $v$  is set exactly fifty eight years before the time of the Context of Thought  $\theta$ , which yields the impression that the speaker is directly witnessing the relevant scene

Schlenker (2004:281)

Schlenker speaks about *witnessing*. Witnessing (the effect to be explained), however, is intuitively thinking at least as much as speaking, and hence the effect is not explained by shifting the context of utterance while leaving the context of thought unchanged. Recall that for Schlenker the distinction between the two contexts is not just a technical distinction. He wants to explain *why* tenses and pronouns are evaluated with respect to one context, and all other indexicals with respect to the other. For this he uses the conceptual distinction between the two contexts, one being a context of a thinker and the other a context of a speaker. For demonstratives, for example, he argues that their reference depends on the 'referential intentions of a thinking agent' which explains why they are evaluated with respect to the context of thought and hence interpreted from the character's perspective in FID.

**Argument 2: Free Indirect Speech and the two contexts** Free Indirect Speech poses a similar problem to the conceptual distinction between the two contexts. In FID (covering both Free Indirect Thought and Free Indirect Speech) the combination of a non-actual (character's) context of thought and an actual (narrator's) context of utterance is to give the impression that 'another person's thoughts are articulated through the speaker's mouth' (p. 280). But now consider (3), where the parts in italics are Free Indirect Speech:

- (3) Mr. Pomfret didn't mention references. His sole concern was the nature of her past duties. *Had she typed, had she filed, taken shorthand?* He said she would start tomorrow; *her hours were nine to five. Sorry, the pay was just minimum wage*, he said. *Also she was expected to brew the coffee; he hoped that wasn't a problem.* Of course it wasn't, Delia said brusquely, and she rose and terminated the interview.

Tyler, *Ladder of Years* [from Dancygier 2012]

The tenses and pronouns are adapted to the narrator's perspective (*had she typed* rather than *have you typed*), but other than that the impression is that we hear the exact words of Mr. Pomfret. Now recall that in FID the context of thought is shifted to a non-actual context. Technically, this has to be Mr. Pomfret's context, since we interpret the words as his. He, for example, is the one from whose perspective a speech act like *Sorry* is to be interpreted. However, Mr. Pomfret is not presented as a *thinker* at all in this passage. (Strikingly, Delia, another character in the story, is intuitively the thinker here! It is through her eyes that we experience this conversation.) This again shows that the conceptual distinction between a context of a speaker and a context of a thinker is untenable.

**Argument 3: FID in the HP** The mirror image analysis predicts that FID can never occur in the HP, since the two make contradictory requirements on the two contexts. This prediction is falsified by the following passage (note *her* rather than *my* in the last sentence, indicating that it is not a direct thought):

- (4) Louise places the parcel on the kitchen table. She can't wait to open it. Who could have sent it? ... Today seems to be her lucky day. Eckardt (2014: 221)

**Argument 4: HP and other indexicals** Another prediction is that in sentences with the HP all indexicals other than pronouns and tenses are evaluated with respect to the actual context. This prediction is not borne out, as shown by *tonight* in (5), an example that Schlenker gives in a footnote and leaves for future research:

- (5) Forty years ago today John Lennon is about to take to the stage at the Cavern. Tonight his life will change forever.

(Note that here we can add *unbeknownst to him*, showing that this is a different phenomenon from (4).)

**Argument 5: The lack of a non-actual I** While Schlenker treats tenses and pronouns on a par (being variables they are always interpreted with respect to the context of utterance), a striking difference between the two is that we do not find the equivalent of the HP in the person domain, that is a non-actual *I*. The fact that Schlenker (2004:298) needs a psychic to tentatively suggest that it does occur (whereas with the HP the narrator only presents things *as if* the context of utterance is non-actual), only shows that the possibility of a non-actual *I* is not part of our language in the same way as the HP is.

**Argument 6: FID is a report** On Schlenker's account FID (as well as the HP) is not strictly speaking a report since it is analyzed without resource to any modal operator. The formalism only specifies that some indexical elements are evaluated with respect to the context of thought and other with respect to the context of utterance. After having given the truth conditions, Schlenker continues:

Thus even in the absence of the parenthetical 'John thought' the sentence can be understood and will be interpreted as a thought or claim attributed to John (because the Context of Thought is his), uttered through somebody else's mouth (the narrator's). Schlenker (2004:293)

I doubt the legitimacy of *because* here. How does the fact that some elements are interpreted with respect to a non-actual context of thought make that the proposition expressed is that person's thought (cf. Stokke 2013 for a similar point)? It seems that the account does not do justice to the fact that FID propositions are *thought*. This is a big difference between FID and sentences with the HP which suggests that they should be analyzed along fundamentally different lines.

**Argument 7: De se tenses and SOT in FID** Contra the mirror image analysis, tenses in FID are not directly evaluated from the narrator's perspective (see Sharvit 2008). If they were, we would expect it to be possible to report (6a) as (6b) if *tomorrow* evaluated from the context of thought is in the past for the narrator. In fact only (6c) is a correct report.

- (6) a. I will ask her tomorrow.  
b. He asked her tomorrow(, he said).  
c. He would ask her tomorrow(, he said).

Not only SOT phenomena but also the fact that tenses in FID are interpreted *de se* indicates that they should be treated as in indirect discourse.

**Replacing the mirror image** Argument 1 and 2 show that the distinction between thinking and speaking is not relevant here. The first step would be to replace this by two contexts that are conceptually neutral with respect to speaking and thinking, i.e. simply two tuples, each serving a particular class of indexicals (à la Eckardt's (2014) internal and external contexts). However, the other arguments show that even without the conceptual component the mirror image account is untenable and FID and the HP should be analyzed along fundamentally different ways.

As for the HP, I follow Eckardt (2014) in assuming that the HP reading arises due to a change of the external context of evaluation. This then becomes a shift independent from the shift associated with FID, as it should be. For FID, the situation is more complex. First, we need to capture that it is a report. Eckardt offers an additional mechanism for story update to deal with this. This mechanism, however, cannot deal with the *de se* interpretation of tenses since it binds the time of the event described in FID directly to the reference time in the story, leading to absurdities if the character is mistaken about the time. Instead I follow Maier's (2015) quotation/unquotation analysis of FID, which treats FID as a report and has the additional advantage of offering a natural explanation for the intuition that reports in FID are faithful to the original wording. Although it intends to treat tenses as in indirect discourse, this component hasn't been worked out yet. Agreeing with Eckardt that we want to temporally link the events described in FID with the rest of the story, but at the same time recognizing that this should not be a direct link, I propose to use Bary and Maier's (2009) extension of DRT in which updates of the common ground are accompanied by updates of each relevant agent's complex attitudinal state. This extension is particularly suited to solve the tension between *de se* interpretation and anaphoricity, needed to deal with tenses in FID.

## Indirect interaction of person and number

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**Introduction:** Ojibwe and Mohawk show a complicated interdependence of person and number features in their agreement paradigm. Bejar & Rezac 2009 and Preminger 2014 can't account for this interdependence, as the number and person probes are independently relativized in those systems. Instead of stipulating the interaction between person and number features, we show that it can be derived by an ordering of the number and person probes, with movement to the specifier of the lower probe feeding agreement by the higher one.

**Data:** Ojibwe verbs follow a radically different agreement paradigm inside embedded clauses, known in the descriptive literature as the 'Conjunct Order' (Valentine 2001). Bejar & Rezac 2009 provide an account of the Independent Order agreement by way of second-cycle probing; however, they do not consider the Conjunct Order, which crucially depends on the number and person features of both arguments of the verb. Descriptively, Conjunct Order agreement behaves as follows:

1. If both arguments are plural, agree with the most highly specified person ( $1 > 2 > 3$ ) in all features.
2. Otherwise: If one argument is plural, agree with it in both person and number.
3. Otherwise: Agree with the subject in both person and number.

- |     |                             |              |     |                           |              |     |                            |              |
|-----|-----------------------------|--------------|-----|---------------------------|--------------|-----|----------------------------|--------------|
| (1) | waabm -i                    | -yaang       | (2) | waabm -inin               | -agog        | (3) | waabm -i                   | -yan         |
|     | see                         | -TH-SIGN -1p |     | see                       | -TH-SIGN -2p |     | see                        | -TH-SIGN -2s |
|     | "you (p) sees us" (2p → 1p) |              |     | "I see you (p)" (1s → 2p) |              |     | "you (s) see me" (2s → 1s) |              |

Example (1) shows that the verb preferentially agrees with a 1st person plural object over a second person plural subject. (2) shows that this preference is ignored in the case that the subject is singular but the object is plural — here, agreement is with the plural argument. Finally, (3) shows that in the case where neither argument is plural, omnivorous agreement with person features is inactive and the verb agrees with the structurally higher argument, i.e. the subject.

Mohawk also shows an interdependence of person and number features in its agreement paradigm. Unlike Ojibwe, Mohawk shows separate agreement for person and plurality, and it is possible for the verb to express the person of one argument but the number of the other. Descriptively, number agreement in Mohawk behaves as follows:

1. If both arguments are local (1st or 2nd person), agree in number with the more highly specified argument (plural > dual > singular).
2. If only one argument is local, agree with it in number.
3. Otherwise, do not agree in number.

- |     |           |     |           |     |           |
|-----|-----------|-----|-----------|-----|-----------|
| (4) | k- wa- V  | (5) | se- wa- V | (6) | ye- sa- V |
|     | 1- pl- V  |     | 2- pl- V  |     | fem- 2- V |
|     | (1s → 2p) |     | (3s → 2p) |     | (3p → 2s) |

The pattern in Mohawk is thus the inverse of Ojibwe — omnivorous agreement number is conditioned by person.

**Theoretical background** Recent work in the domain of agreement (Bejar 2003, Preminger 2011, 2014 a.o.) has argued that number and person features probe separately from one another. By assuming that the relevant  $\phi$ -probes are simply situated in different syntactic positions and utilizing the notion of cyclicity, these accounts ensure that the head that is merged first will probe immediately before the other is merged, and thus person and number agreement takes place in different derivational steps.

Preminger's 2014 system of 'omnivorous' agreement additionally argues for probes which are relativized to specific features (e.g. [author] or [plural]). This allows a probe to see past DPs which do not bear the relevant

features and enter into an agreement relationship with the most local DP bearing the feature that the omnivorous probe seeks. Crucially, for both these accounts person and number probes are taken to be independent of one another - the number probe is unable to make reference to person features and vice versa.

**Problem:** This separation makes it difficult to account for facts like (2). Given the independently demonstrated primacy of the 1st person, both systems would predict that the person probe should copy the 1st person subject's features, while the number probe should copy features from the plural object. This is in contradiction to the attested agreement in (2), which shows 2nd person plural features. This configuration apparently allows the results of one probe (number) to condition the possibilities for the other probe (person). Similar challenges are posed by Mohawk, where agreement for number is conditioned by person features.

**Analysis:** For Ojibwe, we position a number probe specified for [plural] above the base position of the subject, which engages in Multiple Agree (Hiraiwa 2001) with all plural arguments in its domain. This probe raises its goals to its specifier position, where they are visible to a higher person probe (7). (See Oxford 2014 for similar raising in other agreement domains in this language.) All the arguments below the specifier of the number probe remain invisible for the person features probe (8). This allows us to derive the facts in (2), where the 1st person argument remains invisible for the person feature probe, despite being more specified in person features. If there are no plural arguments, a second-cycle of probing moves only the closest one (the subject, as in (9)). This explains the facts in (3), where the verb shows agreement with the 2nd person singular argument despite the presence of the 1st person object argument.

- (7)  $[\pi [DP\text{-}pl_i DP\text{-}pl_j] \quad [\# [t_i [v [V t_j \dots]]] \quad [= (1)]$   
 (8)  $[\pi [DP\text{-}pl_i] \quad [\# [DP\text{-}sg [v [V [t_i \dots]]] \quad [= (2)]$   
 (9)  $[\pi [DP\text{-}sg_i] \quad [\# [t_i [v [V DP\text{-}sg \dots]]] \quad [= (3)]$

The facts in Mohawk can be captured by reversing the order of the probes. A low person probe specified for [participant] raises all local arguments into the domain of a higher number probe (10), which then shows omnivorous agreement with the number features. In (4), we assume that the person probe agrees with both local arguments, but only the more specified features are spelled out. Once these arguments have been raised into the specifier of the person probe, they are visible to the higher number probe. Since the 3rd person argument is not targetted by the person probe in (12), it remains low and is therefore invisible to the higher number probe; as such, number features from non-participant arguments are not visible on the verb.

- (10)  $[\# [DP\text{-}1\text{-}sg_i DP\text{-}2\text{-}pl_j] \quad [\pi [t_i [v [V t_j \dots]]] \quad [= (4)]$   
 (11)  $[\# [DP\text{-}2\text{-}pl_i] \quad [\pi [DP\text{-}3\text{-}sg [v [V [t_i \dots]]] \quad [= (5)]$   
 (12)  $[\# [DP\text{-}2\text{-}sg_i] \quad [\pi [DP\text{-}3\text{-}pl [v [V t_i \dots]]] \quad [= (6)]$

**Predictions:** Within Ojibwe, we predict syntactic asymmetries between singular and plural arguments in terms of the availability of binding from the raised plural object into the singular subject. In a similar way, for Mohawk we predict the availability of binding from the 1st and 2nd person raised objects into the 3rd person subjects.

**Conclusion:** Taking the ordering of the two probes, the availability of multiple agree, and the possibility of movement as parameters allows us to extend prior accounts of omnivorous agreement to Mohawk and Ojibwe. Our analysis derives the attested agreement facts through indirect interaction of the person and number probes rather than a stipulated agreement hierarchy — agreement with one probe conditions the availability of agreement for the other.

## EMERGENT PARAMETERS AND SYNTACTIC COMPLEXITY: NEW PERSPECTIVES

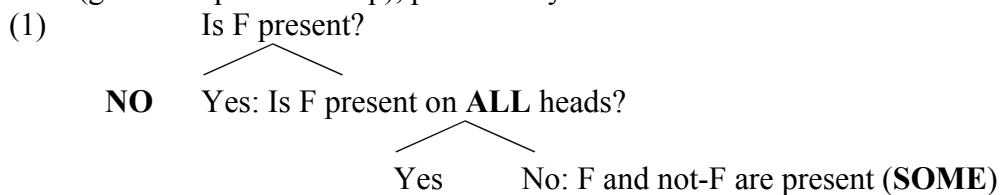
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**Background:** Here we develop ideas in Biberauer, Holmberg, Roberts & Sheehan (2014, BHRS) concerning the formal complexity of linguistic systems viewed from the perspective of an emergentist approach to parametric theory, and its implications for language acquisition and change. Our central idea is that, rather than postulating a rich UG-specified parametric endowment, parameters are emergent properties falling out of the interaction of Chomsky (2005)'s 3 factors: a minimally specified UG (F1), the PLD (F2), and non-language-specific cognitive optimization strategies (F3). Crucially, under F3 we assume a general cognitive economy principle, Maximise Minimal Means, which has 2 major language-oriented reflexes: Feature Economy (FE: postulate as few formal features as possible) and Input Generalization (IG: generalize features as much as possible). Together FE and IG constitute a minimax search/optimization procedure. The goal of this paper is to consider this approach's consequences for how we understand the complexity of grammatical systems in relation to language acquisition and change, focusing in particular on a subset of seemingly privileged formal features.

**The proposal:** Key to the proposal is the idea that FE and IG combine to create a learning path of the general type in (1): postulate NO features (satisfies FE and IG); if a feature F is detected, posit it in ALL (relevant) domains (satisfies IG but not FE); if F is absent in expected parts of the PLD (given the previous step), posit it only in SOME relevant domains.



The first NO is a default: F is only postulated if PLD points to its existence. The last step creates a distinction between domains where F is present and where it is absent, thereby effectively creating a new feature distinction (cf. also Dresher 2009, 2013, where essentially the same idea is applied in phonology, and Jaspers 2013, Seuren & Jaspers 2014 for application in the domain of concept formation). After the last step, the NO>ALL>SOME procedure is repeated for the restricted version of F, and for not-F (i.e. G). Equating parameters with (a subset of) formal features which are open to cross-linguistic variation (Chomsky 1995), this produces parameter hierarchies of a highly constrained and hence comparable kind. We will demonstrate how (1)-type hierarchies work for 4 central features which seem to regulate many properties, i.e. they are pleiotropic, in the sense familiar from Genetics: **Person**, **Tense**, **Case** and **Order**. Call these **Pleiotropic Formal Features** (PFFs).

PFFs have “strong” and “weak” variants: a strong PFF controls more formal features (FFs) and acts in more formal domains than a weak one. If **Person** is strong, it controls the properties of FFs like Number, Gender, etc.) and also plays a role in multiple domains (potentially, all phasal (sub)domains, across all categories); if it is weak, Person is simply instantiated with its standard values (1st, 2nd, possibly 3rd), and other  $\phi$ -features are not grammaticalised (thus not participating in Agree relations, i.e. they are present only as semantic features; Wiltschko 2014). Similarly, **Tense** can be weak or strong. If strong, verb-movement into the higher inflectional field is found, along with restricted VP-ellipsis and few or no auxiliaries; Tense will also function in numerous domains (cf. Ritter & Wiltschko 2014 on CP-Tense, Pearson 2001 on vP-Tense, and Nordlinger & Sadler 2004 on nominal Tense). Moreover, strong Tense controls further FFs (e.g. future, modal and aspectual features). The position of the verb may thus be

relativized to the nature and realisation of other FFs in an intricate way (cf. Schifano 2015 on Romance). If Tense is weak, we see no verb movement to “high” clausal positions, a relatively rich auxiliary system and more liberal VP-ellipsis, with modal and aspectual Fs either not grammaticalised or functioning independently of Tense, which simply has the values Past/Non-Past. **Case** regulates positional argument “licensing” (Vergnaud 1997/2008). Strong Case is associated with the presence of lexical, inherent and/or quirky Case, a rich inventory of Case features, and a range of domains in which it is active (e.g. CP and vP besides the usual nominal and TP-domains). Weak Case entails either an undifferentiated F which merely functions to make arguments active for Agree (as in Chomsky 2001), or a minimally distinct Nominative-Accusative clausal opposition (and possibly Genitive in DP). Strong Case is associated with verbal semantics (argument structure, aspect) and can determine DP semantics (various kinds of partitive case, genitive of negation, specificity, focus, etc.); Weak Case simply licenses arguments in given positions, thereby restricting the range of argument positions (as observed by Vergnaud; cf. GB Case theory). Weak-Case systems are likely to have a richer array of adpositions, especially semantically empty “linker” elements like English *of*, whose sole role is argument-licensing. Finally, **Order** contributes to interpretation in that basic word order identifies unmarked interpretations, thereby serving as a reference point for non-neutral, discourse-marked structures (extended Duality of Patterning). Weak Order means that constituents are linearised without the need to postulate an additional F, e.g.  $\wedge$  in Biberauer, Holmberg & Roberts (2014), i.e. head-initially. Strong Order requires the presence of movement-triggering Fs, giving rise to fully harmonic head-final order and, in keeping with Maximise Minimal Means, scrambling. In (1), “strength” thus corresponds to the ALL option, and “weakness”, a relative and gradient property, either to NONE (Order in fully head-initial systems) or to various sub-options under SOME.

**Evaluating complexity:** As we move downwards along (1)-type hierarchically defined routes, parameters become more “micro”, behaving in a non-uniform, differentiated fashion which is inherently more complex and governed by more Fs than higher systems. The higher options are inherently preferred by the acquirer because FE and IG favour them, absencing PLD forcing more articulated options. Both strong and (default) NO-type weak PFFs can therefore produce non-complex grammatical (sub)systems and might thus be expected to be acquired readily (Tsimplici 2014). Where the systematic nature of more restricted options becomes obscure, we assume a tipping point (Yang 2013), beyond which acquirers no longer postulate an F-defined parametric domain, but begin to learn exceptions. Where minority options of this type rely on low-frequency components of the PLD, we predict IG-conditioned overgeneralisation, which may, in turn, trigger the loss of such options, producing a less complex system. This perspective highlights the need to distinguish not only differing types of parametric complexity (different types of strong vs weak systems, as above), but also to consider the distinction between lexical-item- and feature-based complexity: in parametric terms, a system with lexical exceptions is as simple as one lacking this complication and simpler than one which requires an F-specific rule (the pre-tipping point system). The present approach makes various predictions regarding the relative complexity of systems of different types, which we will attempt to verify. One question is the extent to which all 4 features may pattern together. Since strong PFFs must have robust morphosyntactic exponence to be acquired, we can understand the cross-linguistic tendency for morphologically rich (especially agglutinating) languages to be head-final, while analytic languages tend to be head-initial: this follows from “harmonic” setting of the 4 PFFs to strong and weak, respectively. More generally, following the method introduced in BHRS, we take each successive hierarchical step to be half as probable as the preceding one, and thereby quantify the morphosyntactic complexity of a system in relation to the application of (1)-type hierarchies to the PFFs. We consider the implications of this exercise for both language acquisition and language change.

## Indexing constraints to words: evidence from derived environment effects

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This abstract presents a modest extension of indexed constraints, one that allows us to capture a class of long-distance morphologically derived environment effects (MDEEs) that have been previously unexplained. Our central proposal is that indexed constraints can apply not only to individual morphemes, but also to potentially complex constituents such as the *stem*. This modification allows us to derive the regularization patterns typical of long-distance MDEEs, if complex constituents such as stems are treated as lexically exceptional only when every morpheme contained within them is independently exceptional.

**Background:** Phonology is frequently sensitive to properties of the morphemes to which an operation or constraint applies. In Optimality Theory (OT), one way this has been accounted for is by allowing constraints to be *indexed* to certain classes of words, e.g. to roots (McCarthy & Prince, 1993), loanwords (Itô & Mester, 1995, 2001), nouns (Smith, 2001, 2006), specific lexical items (Pater, 2000; Becker et al., 2011), or exceptional suffixes (Pater, 2007, 2009).

An important observation of work on constraint indexation has been that morphological sensitive constraint evaluation is *local*: the presence of an exceptional affix in a word does not cause all other affixes to behave as though they were also exceptional. To account for this, Pater (2007, 2009) explicitly limits the reach of indexed constraints, so that the locus of violation of an indexed constraint must be part of the morpheme with that index.

**Puzzle:** The locality of indexed constraint evaluation is challenged by the existence of clearly non-local MDEEs, described in recent work by Jurgec (2014) and Gouskova & Linzen (2015). They describe cases in which an exceptional property of a root is *suppressed* in certain morphological contexts. Jurgec (2014) describes a pattern from Dutch, for example, in which the segment [ɪ] is possible in certain loanwords when they appear in underived forms (e.g. *Flo[ɪ]ida* 'Florida'), but replaced by [ʀ] in derived words, including diminutives and derived adjectives (*Flo[ʀ]ida-tje* 'Florida-DIM'). If understood in terms of faithfulness constraints indexed to exceptional roots, or markedness constraints indexed to affixes, such alternations appear to require non-local interactions between affix and non-adjacent root segments.

**Proposal:** We propose that apparently non-local effects can be captured in terms of local constraint evaluation, but only if we allow constraints to be indexed not only to individual morphemes, but also to complex morphological constituents such as stems and morphological words. We share with many others the view that indexed constraints can be sensitive to both morpheme type (e.g. root, affix) and to arbitrary lexical specification (McCarthy & Prince, 1993; Itô & Mester, 1995, 2001; Beckman, 1998; Pater, 2000; Flack, 2007; Gouskova, 2007; Jurgec, 2010). Our extension is that indexed constraints must further be specified for the morphological domain to which they apply, whether this is a single morpheme or a constituent consisting of a root plus zero or more affixes (i.e. a stem or word). Assuming that morphosyntactic notions of headedness are not visible within the phonological component, however, we propose that if a constraint indexed to stems or words is further restricted to some arbitrary class *L*, it will apply only if all morphemes in the stem or word are equally specified as *L*.

This predicts a pattern in which marked structures are preserved in stems or words that contain a single morpheme (i.e. a root belonging to an indexed class), but not in stems or words that are complex (i.e. containing at least one non-exceptional affix). We present corroborating data from Tagalog and 15 other languages.

Consider the Tagalog labial alternations in (1). Tagalog allows *f* in bare loanword roots, but not in prefixed or suffixed words, in which case *p* surfaces. Note that the segmental content of the triggering affix does not matter. We account for this pattern using constraints that can be indexed to both morphological properties (i.e. morpheme type, lexical exceptionality) and to a

morphological domain (i.e. morpheme, stem, word).

- (1) Tagalog MDEE:  $f \rightarrow p$  (Zuraw 2006; Jurgec 2014)

BARE ROOT	$\boxed{f}$	PREFIXED	$\boxed{p}$	SUFFIXED	$\boxed{p}$
filipino	‘Filipino’	mag-pilipino	‘language’	pilipino-ŋ	‘DEF’
fiesta	‘feast’	pam-pista	‘INSTR’	pista-han	‘festival’

For Tagalog, the active constraint is defined in (2):

- (2)  $\text{IDENT}_{L, \text{Word}}$   
 No change in any segment that is part of the phonological exponent of a *Word* specified as  $L[\text{onward}]$ . (A constituent is treated as specified for some property  $P$  iff all morphemes within that constituent are specified as  $P$ .)

This constraint does not apply in suffixed (3) or prefixed words, because the word-level domain contains non-L-marked morphemes (assuming that no prefixes or suffixes are L-marked in Tagalog). It does apply in non-affixed words (4), where the word consists of the L-marked root morpheme only. As a result,  $f$  cannot surface in affixed words, but can surface in bare roots.

- (3) *Root  $\neq$  Word*:  $\text{IDENT}_{L, \omega}$  does not apply (4) *Root = Word*:  $\text{IDENT}_{L, \omega}$  applies

/filipino <sub>L</sub> -ŋ/	$\text{IDENT}_{L, \omega}$	*f	$\text{IDENT}_L$
filipino <sub>L</sub> -ŋ	d.n.a.	*!	
☞ pilipino <sub>L</sub> -ŋ	d.n.a.		*

/filipino <sub>L</sub> /	$\text{IDENT}_{L, \omega}$	*f	$\text{IDENT}_L$
☞ filipino <sub>L</sub>		*	
pilipino <sub>L</sub>	*!		*

The same type of constraint can account for the Dutch loss of [ɪ] discussed above, though to indexation to the *stem* rather than to the word. We show that it can extend further, to account for long-distance MDEEs across 15 other languages, including Russian, Polish, English, Catalan, Hungarian, Basque, and Slovenian. These languages all exhibit exceptional patterns that appear to be overridden in more complex morphological environments, a type of morphological sensitivity that has been challenging for most rule- or constraint-based approaches.

**Discussion:** Our proposal maintains locality of constraint evaluation by attributing non-local MDEEs to the interaction of phonology with complex morphological constituents. Gouskova & Linzen (2015) propose a different account of these effects within a Maximum Entropy grammar that uses weighted constraints to model probabilistic outputs. They account for long-distance MDEEs by proposing that morphemes can be associated with non-locally evaluated regularization factors, alongside locally evaluated scaling factors for individual constraints. By maintaining local evaluation in one aspect of constraint evaluation, but requiring its *absence* in another, their proposal weakens the overall role of locality in the phonological grammar.

A question that remains for our account is whether markedness constraints can be indexed to stems in the same way that we have proposed faithfulness constraints are. Such constraints would predict cases where marked structures can occur only in affixed words, and to our knowledge such patterns are unattested. This leads to the interesting possibility that indexation to complex morphological constituents may be possible only for faithfulness constraints, echoing earlier proposals that indexation more generally is possible only in the domain of faithfulness (Itô & Mester, 1995, 1999; Inkelas & Zoll, 2007). We leave this for further investigation.

**Conclusions:** Morphologically derived environment effects constitute an unusual case of long-distance interactions arising from the interplay of exceptional phonological patterns and morphological structure of words. These patterns have constituted a serious challenge for theories of locality and exceptionality in phonology, but we show that a simple extension of lexical indexation so that it refers to morphological domains can successfully account for them.

## Null subjects in Middle Low German

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As is well-known, referential null subjects (RNS) are disallowed in the Modern Germanic languages (Rosenkvist 2009), with a few exceptions (e.g. Axel & Weiß 2010). While RNS in the older Germanic languages have been studied in some detail (recently by Rosenkvist 2009, Axel 2007, Schlachter 2012, Van Gelderen 2012, Walkden 2013, 2014, Kinn 2014), considerably less is known about the intermediate periods. The present paper analyses the distribution of RNS in Middle Low German (MLG), the West-Germanic language spoken and written in northern Germany (and, in connection to the Hanseatic trade, around the North and Baltic seas) between c. 1250 and 1600, the syntax of which has only recently begun to attract the attention of linguists. It is shown in this paper that RNS are attested in MLG, and while they show remarkable continuity with Old Saxon, they are distributed in a peculiar fashion, posing a challenge both for an analysis in terms of partial pro-drop as well as in terms of topic drop. The present study is based on a 45,000-word corpus of eight MLG texts (14th -16th centuries) from three genres (laws, charters, (religious) prose).

In the great majority of the cases, a pronominal subject is omitted in a main clause introduced by the conjunction *vnde* ‘and’. However, an analysis in terms of conjunction reduction is not available in the relevant cases. Often, the referent of the RNS is typically found in a preceding adjunct clause, such as a relative or conditional clause. Hence, the antecedent cannot bind the null pronoun. In other cases, the referent in the discourse appears in a different number, case, or grammatical function, adding further doubt about an analysis in terms of conjunction reduction. In (1) for instance, the referent is contained in the first of two conjuncts, but it is not the subject there, but the object. The overt nominative form is found inside an embedded (final) clause (*dat ghi ... werden*).

- (1) God gheue iv also to soeken vn(de) to lessen dat ghi daer by verbetert werden. Vnde [pro] willen dit boeck to godes eeren beghinne(n).  
God give.sbjn you.acc.pl therefore to search and to read that you.nom.pl there at improved be and [you] will this book to God’s honour begin  
‘May God inspire you to search and to read, in order for you to be improved by it.  
And [you] may/may [you] begin (to read) this book to honour God.’  
(Münster, *Spieghel der leyen*, 1444)

More generally, it can be noted that *vnde* ‘and’ is in many cases not used as a coordinating conjunction, but rather as a discourse marker dividing up chunks of information. Hence, cases like (1) are not in fact conjunction reduction, but contain genuine RNS. Furthermore, RNS are not only found in what could be argued to be a topic position as in (1). In (2), the topic position is already filled with an adverbially used infinitive phrase.

- (2) v(m)me vns to verlose(n) heuest [pro] willen anneme(n) vnse kranch(ei)t  
for us to deliver have [you] want.IPP on-take our disease  
‘In order to relieve us, you have wanted to take on our disease’  
(Münster, *Dat myrren bundeken*, 1480)

That is, both an analysis in terms of conjunction reduction and in terms of topic drop is ruled out. As null objects are attested, if rarely, null expletives are frequent, and as null generic subjects are possible, if dispreferred (as in other older West Germanic pro-drop systems), we propose to analyse MLG as a partial pro-drop language. As in Old Saxon (Walkden 2014),

there is a significant preference for RNS to be 3rd person and to occur in main clauses. This makes MLG appear conservative compared to languages contemporary to it, viz. Early NewHigh German (preferring 2nd as well as 3rd person, Volodina 2009) and Middle Norwegian (preferring 1st and 3rd person, Kinn in prep.). A closer look reveals a curious distribution: About 60% of the RNS are found in SpecCP/SpecFinP, where they strongly prefer 3rd person. 1st person is possible, but rarer, and 2nd person RNS are not attested in this position. About 40% on the other hand are found in a position following C, i.e., the so-called Wackernagel position. In this position, all persons are attested, especially 2nd and 3rd, though 3rd person remains most frequent in absolute numbers.

Based on these observations, we argue that MLG distinguished two different kinds of RNS, one in SpecCP/SpecFinP and one in SpecTP. In this respect, MLG resembles Old Icelandic (cf. Sigurðsson 1993:264). As in Old Icelandic, we argue that the former is a null topic, or rather, a full DP with a [uD]-feature licensed by a null topic operator as proposed by Walkden (2014) for Old Saxon, among others. This will in most cases be an Aboutness topic operator in SpecShiftP, as under Walkden's analysis, but it may also be a topic operator in Spec $\Lambda$  AP (Sigurðsson 2011, identifying the referent of the null subject as the logophoric agent).

The latter type of RNS, on the other hand, is what Sigurðsson calls "genuine pro". Based on its distribution and the system of strong and deficient pronouns (cf. Cardinaletti & Starke 1999) in MLG more generally, we argue that this element is a phonetically null clitic pronoun. This analysis is supported by the observation that RNS in this position are mostly 2nd or 3rd person singular, which are exactly the categories for which there are also overt clitic forms in the MLG pronominal system.

This analysis predicts that two null arguments should be possible in a single clause, which is indeed borne out, as (3) demonstrates.

- (3) ... du byst alleine myn i wiff vude [pro i ] hebbe nye [nene ander] j gehad noch [pro i ]  
[Ø j ] hyr na hebben wil  
... you are alone my wife and [I] have never no other had nor [I] [another] here after  
have will  
'...you alone are my wife, and [I] have never had another one, nor will [I] ever have  
[another one]'  
(Hamburg, *Griseldis*, 1502)

We take the fact that the SpecCP/SpecFinP-type of RNS is more frequent (60%) than the Wackernagel clitic type (40%) as evidence for MLG beginning the transition to a topic-drop language, though the distribution of the RNS in SpecCP/SpecFinP is still not the same as in the modern V2-Germanic languages, and MLG retains a proportion of genuine pro.

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# Using Intra-Speaker Variation to Diagnose Syntactic Structure

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**1. Introduction.** This paper argues that cross-linguistic studies of patterns of intra-speaker morphosyntactic variation can help solve longstanding puzzles associated with the syntactic structure of the expressions that are in variation. It has been long observed in the field of language variation and change (since Labov, 1966, see the recent discussion in Bresnan 2007 for syntax) that, in addition to social and general cognitive factors, the grammatical structures of synonymous linguistic expressions in a language at least partially determine the patterns of use of these expressions. This paper shows how we can exploit this connection between syntactic structure and language use to contribute to the theoretical debate concerning the syntactic analysis of negative concord sentences in Canadian French.

**2. The Negative Concord Puzzle.** Varieties of French spoken in Canada allow the sentential negation marker *pas* ‘not’ to (optionally) co-occur with a class of indefinites (called *nwords*, ex. *personne* ‘no/anyone’, *rien* ‘no/anything’ and *aucun* ‘no/any’), creating a single negation interpretation (ex. J’ai (**pas**) **rien** lu. ‘I read nothing’). Within the enormous theoretical literature on negative concord phenomena cross-linguistically, we can identify two main styles of analysis: (what we will call) the **negative quantifier** analysis, which proposes that (modulo the presence of *pas*) the syntactic structure of a concord sentence is identical to that of the corresponding bare sentence (May, 1985, Corblin, 1996, Corblin & Tovenia, 2003, de Swart 2010, a.o.), and (what we will call) the **negative polarity item** (NPI) analysis, which proposes that the syntactic structure of a concord sentence is that of a sentence containing negation and a non-negative polarity dependent indefinite (see Laka, 1990, Ladusaw, 1992, Herburger 2001, Déprez 2002, Déprez & Martineau, 2004, Zeijlstra, 2008, Chierchia, 2013, a.o.). In other words, in the NPI analysis, variable negative concord is analyzed as parallel to variation between utterances containing negative quantifiers (such as English *nothing*) and NPIs (such as *anything*).

(1) a. J’ai **rien** lu.      ≈ I read **nothing**.      b. J’ai **pas rien** lu.      ≈ I didn’t read **anything**.

Although both of these two styles of analysis have been adopted in the literature, choosing between them for the analysis of the Canadian French system is problematic: on the one hand, the negative quantifier analysis is attractive because we know independently (from (1a)) that *nwords* can be negative quantifiers in the language. However, an analysis in which *rien* in (1b) has a negative interpretation requires a non-canonical semantic composition rule in order to derive a single negation interpretation for this sentence. On the other hand, the NPI analysis is attractive because it keeps the compositional semantics of concord sentences simple, and is consistent with the diachronic observation that in the 17th century (when French was brought to Canada), (most) French *nwords* were NPIs (see Labelle & Espinal, 2014 for a recent overview). However, the NPI analysis involves proposing the existence of two classes of homophonous items (negative Qs and NPIs) which are proposed to have a syntactic distribution that is (almost) a **proper subset** of the syntactic distribution of the negative Qs. Therefore, from grammaticality judgments alone, it is not clear how such an analysis could be empirically distinguished from its alternative. We argue that cross-linguistic comparison of patterns of intraspeaker variation will allow us to break this stalemate. Given that the NPI analysis assimilates negative concord to NPI licensing, this theory makes the very clear empirical prediction that variable negative concord in Canadian French should be conditioned by

the same grammatical factors that condition Neg Q/NPI variation more generally. In order to test this prediction, we compare the grammatical factors conditioning variable negative concord (as observed in Burnett, Tremblay & Blondeau (2015)’s study of the phenomenon in the *Montréal 84* corpus (Thibault & Vincent 1990)) with the grammatical factors that condition a clearer case of variation between negative quantifiers and NPIs: *no/not...any* variation in English.

**3. Previous work on Canadian French.** Inspired by Zanuttini (1997)’s work on Italo-Romance dialects where these constraints create grammaticality contrasts, Burnett et al. show (using regression analysis) that the most important factor conditioning the use of bare versus concord sentences in *Montréal 84* is the structural configuration in which the nword appears. These authors show that sentences in which nwords and negation appear in a structurally adjacent configuration, i.e. are not separated by any lexical predicate (ex. *Je vois pas personne* ‘I don’t see anyone’; *Ya pas personne icitte* ‘There’s no one here’) are highly disfavoured (5%) compared to the corresponding structures with bare nwords (*Je vois personne*; *Ya personne icitte*). However, if the nword is embedded within another verbal or prepositional predicate (ex. *Ya pas eu personne icitte*; *Je parle pas à personne*), then the NPI variant is much more frequent (41%). With this result in mind, we investigate whether structural adjacency plays the same role in *no/not...any* variation in English, as observed in three sociolinguistically stratified corpora: the Toronto English Corpus (TEC: Tagliamonte, 2010-3), the York English Corpus (YEC: Tagliamonte, 1998), and the Roots of English (ROE: rural UK, Tagliamonte, 2003-6) Corpus).

**4. Data collection and annotation.** From the English corpora, we extracted all the occurrences of negative quantifiers and *any*-style NPIs that show a non-trivial amount of variation (*no/any one*; *no/anybody*, *no/anything*, *none*, *no/nee/any*, (*n*)*owt*). Then, in our final datasets from the TEC (n=663), YEC (n=695), and the ROE (n=415), we coded for structural adjacency in the same way as Burnett et al: *There isn’t anybody here/There’s nobody here*; *He isn’t anything/He’s nothing* (**structurally adjacent**) vs *He isn’t eating anything/He is eating nothing*; *He hadn’t written to anybody/He had written to nobody* (**Not structurally adjacent**).

**5. Results and discussion.** Although the overall rate of the use of the NPI variant differs across corpora (43% in TEC; 28% in YEC; 17% in ROE), in each case, we find a significant ( $p < 0.01$ ) effect of structural adjacency disavouring the use of *not...any*. That is, the use of an NPI is significantly disfavoured in utterances in which it is (or would be) in the same minimal syntactic domain as its licensor (9% struct. adj. vs 88% not struct. adj. in TEC; 7% vs 82% in YEC; 3% vs 40% in ROE). A logistic regression analysis additionally identified the lexical identity of the indefinite and social factors as significant; however, structural adjacency remains the largest effect across the three corpora studied. Thus, we conclude that structural adjacency is an important grammatical factor conditioning Neg Q/NPI variation and that, moreover, the empirical predictions of the NPI analysis for Canadian French negative concord are borne out. Furthermore, our comparative corpus studies have allowed us to discover a new **anti-locality** effect in NPI licensing in French and English. Typologically speaking, anti-locality effects are common with polarity dependencies (see, for example, *libo*-NPIs in Russian (Pereltsvaig, 2006)). In contrast, non-canonical semantic composition (as would be proposed in the negative quantifier analysis) is generally proposed to require strict syntactic **locality** (Heim & Kratzer, 1998; de Swart & Sag, 2002; Chung & Ladusaw, 2003, a.o.), i.e. such an analysis would predict the opposite variation pattern from the one we observed. We therefore conclude that this result provides an important new empirical argument in favour of the NPI analysis over its alternative for negative concord in Canadian French.

## Subjective Containmentment

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**Synopsis:** We defend the hypothesis that a category carrying a ‘subjective’ interpretation (Lyons 1977) must take wide scope over operators of a different type, including quantified NPs (QPs). We model scope shift as index percolation restricted by a minimality condition. The resulting proposal makes correct predictions regarding epistemic containment (von Fintel & Iatridou 2003), including some exceptions to it. It also captures containment effects imposed by subjective non-epistemic categories, such as Ernst’s (2009) subjective adverbs and Ladd’s (1981) Outer Negation, as well as additional QP scope freezing effects in the context of a subjective category.

**1. Subjective Containmentment.** Ernst (2009) distinguishes speaker-oriented adverbs on the basis of whether they are interpreted as subjective or objective (Lyons 1977). Strong evaluative adverbs (e.g. *bizarrely*, *unbelievably*) are subjective in that they express the speaker’s invocation of less widely accepted evidence for the evaluation represented by the respective adverb, and hence highlight her personal belief state and full commitment to this evaluation. Evidentials (e.g. *apparently*, *obviously*) are objective in that their use depends on publicly available evidence. Epistemic modals (e.g. *probably*, *may*, *appear*) may either be interpreted as subjective or objective, depending on the pragmatic context (Ernst 2009; a.o.).

Since Von Fintel & Iatridou’s (2003) Epistemic Containment Principle (ECP), which suggests that QPs cannot have scope over an epistemic modal, there has been some work (Tancredi 2007; Huitink 2008; Anand & Hacquard 2009) indicating that some exceptions to this generalization relate to whether these modals are interpreted subjectively or objectively:

- (1) a. #Every party guest might be the murderer. (*every* > *might* inaccessible)
- b. Given the currently available evidence/objectively speaking, every party guest might be the murderer. (*every* > *might* accessible)

This paper argues for a stronger conclusion; that is, the containment effect in (1a) has nothing to do with the epistemic aspect of *might*, but instead it is only due to its subjective interpretation. This generalization predicts that QPs will exhibit containment effects in the presence of non-epistemic evaluative (i.e. subjective) adverbs (see (2)) but not with evidential (i.e. objective) adverbs (see (3)). The contexts in (2) and (3) force wide scope for the QP.

- (2) *Context: I had 30 students in my final year syntax class. To obtain their degree, they had to pass my exam. For 10 of these students, I considered it better if they failed as they were just not ready for the big world. After the exam had taken place, I quickly marked all the scripts and discovered that everybody had passed. So as far as I’m concerned...*

\*Fewer than half of the students have unfortunately passed the exam.

- (3) *Context I had 30 students in my final year syntax class. After the final exam had taken place, I asked my TAs to quickly mark the scripts. They have so far only marked about 10 scripts, but they are saying that the students have done really well. So ...*

Fewer than half of the students have apparently passed.

That it is indeed the speaker’s commitment to the evaluation of a proposition that matters is further confirmed by scope interactions between QPs and Ladd’s (1981) Outer Negation (ON), which expresses that the speaker seeks confirmation for a proposition held to be true on the basis of *private* concerns (Buring & Gunlongson 2000; Sudo 2013). The context in (4) forces a wide scope of the QP and, as shown in (4a), the QP cannot be interpreted as such over ON. Interestingly, the QP is fully interpretable in the environment of a tag question (which has similar meaning to ON), given the same context (see (4b)).

- (4) *Context: I had 30 students in my final year syntax class. They all passed the coursework, but to obtain their degree, they had to pass my exam. For about 10 of*

*them, I was almost certain that they would. My TAs marked all the scripts and I ask:*

- a. \*Haven't fewer than half of the students managed to pass the exam(, too)?
- b. Fewer than half the students have managed to pass the exam, haven't they?

(5) provides a context that is compatible with a narrow scope of the QP and, as expected, (4a) now becomes fully interpretable.

(5) *Context: I have 30 students in my final year syntax class and it is a weak cohort. They all passed the coursework. However, they also all have to pass my exam. Usually, around half of each year's cohort manages to pass the exam, as it very hard. Now I'm pretty certain that not even half will pass it. My TAs marked all the scripts and I ask:*

Haven't fewer than half of the students managed to pass the exam(, too)?

**2. Encoding scope:** Following Williams (1994), the scope of a quantificational category is either its c-command domain ( $\gamma$  for the QP in (6a)) or a larger constituent as determined by the percolation of a scope index (e.g.  $\gamma$  for the QP in (6b)); an inherited scope index follows a colon). Covert scope extension is thus not achieved via (covert) movement of the QP.

- (6) a.  $[_\alpha \text{ QP } [_\gamma \delta [_\varepsilon \zeta \eta ]]]$
- b.  $[_\alpha \beta [_{\gamma:1} \delta [_{\varepsilon:1} \zeta \text{ QP}_1 ]]]$

Neeleman & Van de Koot (2012) propose the Condition on Scope Shift (CSS) to account for scope freezing effects between contrastive categories, between QPs, and between both.

**CSS:** No node may inherit more than one scope index.

With this background in mind, we propose the following:

### **Scope of Subjective Categories (SSC)**

A subjective category must outscope operators of a different type by percolating an index.

**3. Explaining Subjective Containment:** (7) illustrates how the SSC and CSS combine to explain the contrast between (1a), (2) and (4a) on the one hand and (1b) and (3) on the other.

- (7) a.  $*[_{TP:1,2} [\text{every party guest}]_2 [_{T':1} \text{might}_1 \dots]]$  = (1a)
- b.  $*[_{TP:1,2} [\text{Fewer than...}]_2 [_{T':1} \text{have } [_{VP:1} [\text{unfortunately}]_1 [_{VP} \dots ]]]]$  = (2)
- c.  $*[_{CP1:2} [\text{Haven't}]_1 [_{TP:2} [\text{fewer than...}]_2 [_{T':1} t_{\text{haven't}} [_{VP}]]]]]$  = (4a)
- d.  $[_{TP} [\text{every party guest}] [_{T'} \text{might} \dots]]$  = (1b)
- e.  $[_{TP} [\text{Fewer than...}] [_{T'} \text{have } [_{VP} [\text{apparently}] [_{VP} \dots ]]]]$  = (3)

The SSC forces the subjective categories in (7a-c) to percolate an index up to the CP/TP level. The context for these structures also force the QP to percolate an index past the CP/TP level in order to ensure wide scope over the subjective category. This results in a CSS violation. By contrast, the scope of the objective categories in (7d-e) coincides with their c-command domain (no index percolation occurs). The structurally higher QPs outscope the respective objective categories in virtue of the fact that the latter is in their c-command domain.

**4. Further Predictions:** The account outlined above to explain subjective containment receives additional support from the facts in (8). (8a) and (8b) demonstrate that a subjective adverb can give rise to QP scope freezing effects when the adverb intervenes between the two QPs. (8c) and (8d) show that an objective adverb does not do so, irrespective of its position. The context forces wide scope of the universal.

(8) *Context: Our film production company is looking for lead actresses for a number of new movies to be shot in the coming year. We have a total of 10 film scripts, which we showed to a group of 50 actresses. As you might expect, there was no single actress who liked all 10 scripts. However, we will be able to go ahead with each movie, since:*

- a. \*At least one actress fortunately believed every script to be interesting.  $(*\forall > \exists)$
- b. Fortunately, at least one actress believed every script to be interesting.  $(\checkmark \forall > \exists)$
- c. At least one actress apparently believed every script to be interesting.  $(\checkmark \forall > \exists)$
- d. Apparently, at least one actress believed every script to be interesting.  $(\checkmark \forall > \exists)$

The data in (8) are again due to the combined effect of the SSC and CSS; in (8a) *fortunately* percolates its index up to the TP level, while the universal is forced by the context to percolate

its own index to outscope the existential. This results in a CSS violation. No CSS violation occurs in (8b-d), either because the subjective adverb does not intervene, as in (8b), or because the adverb is objective, as in (8c-d).

## Structure beyond Force? Evidence for a ‘speech act’ projection from Ibero-Romance

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It has been argued that certain clause-initial instances of the Ibero-Romance finite complementizer *que*, as illustrated in (1-3), differ syntactically from the subordinating use of the complementizer in dependent clauses (Biezma 2007, Demonte & Fernández-Soriano 2013, 2014, Colaço & Matos 2015). Descriptively, exclamative *que* (1) introduces a declarative clause with exclamative illocutionary force, involving expressive (Potts 2007) meaning. Conjunctive *que* (2) is used in clause-initial position to link two independent clauses. Quotative *que* (3) allows the speaker to present a sentence without having to commit to the truth of its proposition. Using diagnostics in Krifka (2001, 2003, 2014), Faller (2006), Etxepare (2010), we show that the different interpretations of *que* in (1-3) each correspond to a distinct syntax, data which we claim corroborate recent proposals reviving a ‘performative’ syntax of speech acts (Ross 1970, Speas & Tenny 2003, Haegeman 2014, Wiltschko 2015):

- (1) Ai, **que** non chego a tempo!!!  
ai EXCL not arrive.1SG on time
- (2) Fe-lo ya, **que** lebo tó ro diya asperando á que lo remates!  
do.IMP=it already for spend.1SG all the day waiting for that it finish.SUBJ.2SG
- (3) [...] B:eh? A: **Que** no ho tenia molt clar tampoc  
huh QUOT not it have.IMP.1SG very clear either

Firstly, quotative *que* (3, 4) can introduce all clause types except ‘true’ imperatives, whereas conjunctive *que* (2, 5) and exclamative *que* (1, 6) can introduce only declarative clauses and rhetorical polar interrogatives, with exclamative *que* (7) able to introduce wh-exclamatives and rhetorical wh-interrogatives in a subset of Ibero-Romance varieties:

- (4) **que** {la conèixes? / quants dies t’hi estaràs? / \*digue’m!}  
QUOT her know.3SG how.many days you=there be.FUT.2SG tell.IMP=me
- (5) fes-ho ara, {**que** et sembla que tinc tot el dia?! / \*la conèixes? / \*digue’m!}  
do.IMP=it now CONJ you seem.3SG that have.1SG all the day her know.2SG tell.IMP=me
- (6) **que** {\*la conèixes? /et sembla que tinc tot el dia?! / \*què coi fas aquí?!}  
EXCL her know.2sg you seem.3sg that have.1sg all the day what on.earth do.2sg here
- (7) joer **que** qué envidia cochina mah grande / **Que** qué diablos te pasa mocosa?!  
Fuck EXCL what envy total more big EXCL what devils you happen.3SG snotty.FEM

Secondly, the root *que* sentences show distinct behaviours with respect to conjunction, disjunction and embedding, where compatibility in these environments is taken to be a property of C-heads, and incompatibility is taken as an indicator of operation at the speech-act level. The Ibero-Romance data show that quotative *que* (8) is felicitous in these constructions whereas exclamative *que* (9) and conjunctive *que* (10) are not:

- (8) To madre (dixo) **que** va de compres y/o **que** si quies daqué que la llares  
your mother said.3sg QUOT go.3SG of shopping and/or QUOT if want.2SG anything that her call.2SG
- (9) (\*disse) **que** isso sai muito caro \*e/\*ou **que** não tenho seguro!!!  
said.1SG EXCL that come.out.3SG very dear and/or EXCL not have.1SG insurance
- (10) No me pises, (\*dije) **que** llevo chanclas \*y/o **que** soy sensible.  
not me step.2SG said.1SG CONJ WEAR.1SG sandals and/or CONJ be.1SG sensitive

Thirdly, each instance of *que* shows a different clausal distribution when tested against left-peripheral elements, including vocatives, (grammaticalised) interjections and discourse particles, items independently argued to encode speech-act information (e.g. Haegeman & Hill 2014, Paul 2014). Conjunctive *que* (11) sentences are incompatible with a sentence-initial vocative or discourse-activating particle, whereas exclamative *que* (12) and quotative *que* (13)

sentences must surface below these items. All instances of root-clause *que* obtain above CP-related discourse elements (e.g. topics, wh-phrases), where such elements are licit (14).

- (11) Escúchame, (\*oye) (\*María) **que** vamos a llegar tarde  
listen.IMP=me PRT María.VOC CONJ go.1SG to arrive.INFIN late
- (12) ¡¡¡(\***que**) ay (\***que**) churri **que** me pongo toa colorada!!!  
EXCL PRT EXCL darling EXCL me.REFL put.1SG all red
- (13) (\***que**) oye, (\***que**) María, **que** el Barça ha ganado la Champions.  
QUOT PRT QUOT María.VOC QUOT the Barcelona AUX.3SG won the Champions.league
- (14) Sube'l volumen, **que** Manolo<sub>i</sub>, (\***que**) siempre alcuérdome d'el<sub>i</sub> cuando ponen  
raise.IMP=the volume CONJ Manolo CONJ always remind.1SG=me of=him when put.3PL  
esa canción  
that song

Fourthly, the separate types of root clause *que* discussed here show different availabilities across Ibero-Romance varieties: conjunctive *que* is available in all Ibero-Romance varieties tested, whereas exclamative *que* is permitted in a subset of these varieties, and quotative *que* is available in a distinct subset.

Together, the distinct properties of quotative, exclamative and conjunctive *que* are taken as evidence supporting the hypotheses that i) (certain) speech act information is represented syntactically, and ii) extra syntactic structure is needed to incorporate such information. Using a Cartographic framework, we claim that 'quotative' *que* introduces a presentative (Déchaine et al 2015) sentence, and lexicalises the head of the lower projection of a decomposed Force layer (Coniglio & Zegrean 2012), corresponding to an evidential/clause-typing projection. Exclamative and conjunctive *que* sentences are proposed to surface in distinct projections of a separate, internally-articulated domain dedicated to the encoding of speech-act information (viz. Haegeman 2014's bipartite Speech Act Phrase), located above Force. Moreover, the data support independently-justified meaning-to-structure mappings of the clausal architecture (e.g. Rizzi 1997, Cinque 1999, Coniglio & Zegrean 2012, Haegeman 2014), and provide the empirical impetus to join these together in a unified cartography. Combining pre-existing mappings of the syntactic space allows us to account for the Ibero-Romance facts – and corroborate the theoretical framework already in place – without resorting to the postulation of further functional structure.

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## Omission evidence for child V-to-T upwards (re)analysis

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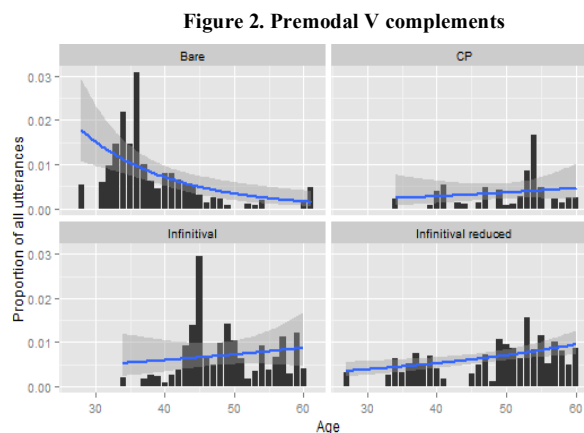
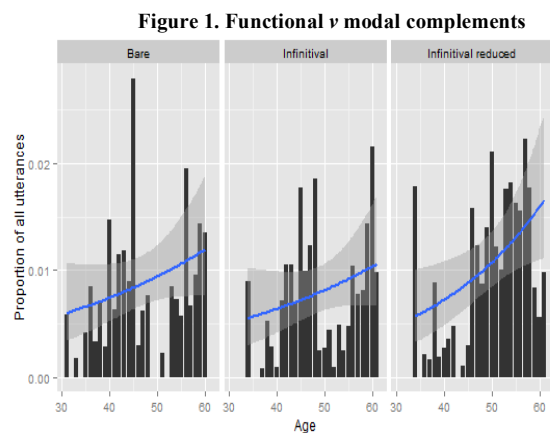
Diachronic syntax research reveals robust patterns of *upwards reanalysis* (Roberts and Roussou 2003), from lower to higher syntactic heads (e.g.,  $V \rightarrow v \rightarrow \text{INFL}$ ), as with modals in the history of English (Lightfoot 1979; Roberts 1985; i.a.). Generative change theorists propose that this occurs when child learners reanalyze the input language in accordance with, for example, economy principles (e.g., *Merge over Move*: van Gelderen 2004). This proposal has rarely been explored in child language (see Baron 1977; Weerman 1993; van Gelderen 2011: 21-6), and no previous approach has formalized *upwards reanalysis* predictions at the right level of formal analysis for child language investigation. In this paper, I present a corpus study of modal development in a typical child. My aim is to investigate whether child modal constructions support V-to-INFL reanalysis by showing divergence from the input that aligns with the diachronic pattern. The contemporary child is expected to drive new modal changes.

**Methods.** All utterances with modal verbs (INFL,  $v$ ) and a subset of premodals (V) were extracted for Sarah (2440 of 37,021 child utterances from age 2;3-5;1; Brown 1973), yielding 604 instances of premodals, 621 functional verb modals (or “quasi-modals”, which for simplicity’s sake I categorize as little  $v$ ), and 1215 canonical auxiliary modals (INFL elements; Pollock 1989; i.a.). Premodal verbs (e.g., *want*, *know*, *try*) are known to be reanalysed into functional verb modals (e.g., *have to*, *got to*), which in turn become INFL elements (e.g., *must*, *will*, *can*), and are finally lost (Roberts 1985; Bybee et al. 1994; i.a.). By examining all three syntactic categories we can see whether the child “recruits from below”, or in other words, whether she diverges from her input in ways that would provide the expected renewals for modals in contemporary English (see van Gelderen 2004, 2011).

Utterances were coded for **(a)** modal category (V,  $v$ , INFL), **(b)** modal complement type (bare V,  $\text{VP}_{\text{INF}}$ ,  $\text{VP}_{\text{FIN}}$ , CP) and **(c)** *be*-omissions where applicable (e.g., *I Ø supposed to go*). Modal complement type was examined because in the input premodal Vs occur with DP, CP, and VP complements (e.g., *want [cookie/Dad to read/to go]*),  $v$  modals with only  $\text{VP}_{\text{INF}}$  (e.g., *have to go/gonna go*) and INFL only with bare verbs (e.g., *must go*); if the child is miscategorising any of these modals upwards in the syntactic hierarchy then this should be seen in complement selection patterns. *Be*-omissions are likewise of interest because they only occur with functional verb modals in the input (e.g., *I \*(am) going to/supposed to exercise more*); *be*-omissions lead the affected  $v$  modals to pattern like INFL modals (c.f., *I must go*). In short, utterances were assessed for patterns of use that align with upwards reanalysis in the syntactic hierarchy. To test for frequency effects and input patterns, the input was sampled for the same modals and premodals (300 items).

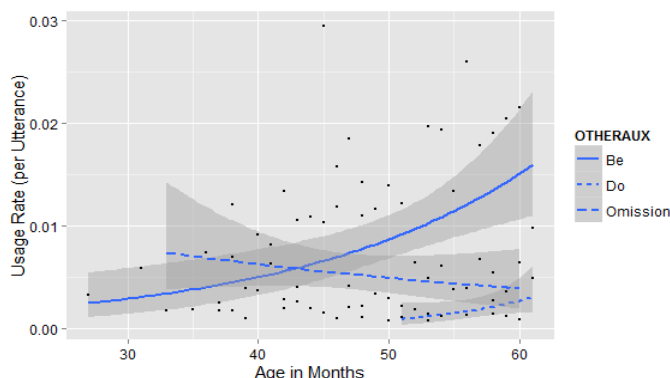
**Results.** Results show that **(i)** premodals are more frequently used with VP complements in the child data than in the input ( $\chi^2=21.5546$ ,  $df=3$ ,  $p < .001$ ). Presumably the child could also have used more DP complements with these verbs (e.g., *want book*), but rather she is progressive on the grammaticalization pathway, not conservative. Further, **(ii)** functional verb modals exhibit persistent erroneous bare complements (e.g., *goin go*, *have pee*, *got be bubble gum*) (Figure 1, first box), despite bare complements gradually disappearing with premodal

verbs (Figure 2, first box). This suggests the child may be treating these functional verbs in line with INFL-domain modals that select bare complements ( $v > \text{INFL}$ ).



And, finally, (iii) *be*-omissions with functional verb modals persist into the 6<sup>th</sup> year of life, well past their resolution in other areas of the grammar (i.e. in the progressive or copular constructions; Brown 1973, Becker 2002; i.a.) (Figure 3). This usage pattern also shows that the child's functional verb modals pattern with INFL modals.

**Figure 3: BE for *going* and *supposed* by month**



**Conclusion.** A targeted child data study on the modal system of a single child shows biased learning patterns consistent with  $V \rightarrow v \rightarrow \text{INFL}$  reanalysis, providing some support for the proposal that learner bias may explain *upwards reanalysis* (e.g., Roberts and Roussou 2003 and van Gelderen 2004). Sarah's omissions make strings pattern with the next stage in syntactic change *v-modals* pattern with INFL-modals (*I going go = I must go*). This result, if we take it at face value that omissions reveal an INFL analysis for the set of *v* modals, suggest the child may have competing grammars (i.e., she posits both *v going* and INFL *going*), like we see in diachrony (Yang 2000, i.a.).

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# A microparameter in a nanoparametric world

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## INTRODUCTION

Dealing with raw dialect data can be very daunting. Consider the following mini-maps:



Depicted here is the distribution in Belgium and the Netherlands of complementizer agreement (CA, see (1)), clitic doubling (CD, (1)), short *do* replies (SDR, (2)), the negative clitic *en* (NEG, (2)), and clitics on ‘yes’ and ‘no’ (CYN, (3)) (all data from Barbiers (2006)).

- (1) *da-n ze zunder morgen goan.*  
that.PL they<sub>CLITIC</sub> they<sub>STRONG</sub> tomorrow go  
‘that they are going tomorrow.’ CA + CD
- (2) *A: Ie slaapt. B: Ie en doet.*  
he sleeps he NEG does  
‘A: He’s sleeping. B: No, he isn’t.’ SDR + NEG
- (3) *A: Wil je nog koffie? B: Jaa-k.*  
want you PART coffee Yes-I  
‘A: Do you want some more coffee? B: Yes.’ CYN

While it is intuitively clear that there is a certain degree of resemblance between the distribution of these phenomena—all of them show a concentration in the lower-left (i.e. West Flemish) area—how to make that intuition precise is far from clear. This paper provides a three-step approach that converts the geographical data into a parametric account. The surprising conclusion of our analysis is that Baker (2008)’s distinction between parameters formulated over individual functional items (his microparameters) and those formulated over “the general principles that shape natural languages” (macroparameters) can be recreated at the level of microvariation.

## STEP ONE: STATISTICAL ANALYSIS OF THE AGGREGATE DATA

Following the Reverse Dialectometry approach of van Craenenbroeck (2014) we first provide a statistical analysis of all the data points shown in the mini-maps. In particular, for each of the five phenomena, we look at 267 dialect locations and see if they occur there or not. In a next step, we compare the five phenomena with respect to how similar or dissimilar their distribution is. Thirdly, we reduce the dimensionality of our data set, so that we can plot and visualize the patterns in the data. That plot is shown in figure 1. The plot shows three things: (a) there is a first dimension (the *x*-axis) which sets apart CA from the other phenomena, (b) there is a second dimension (the *y*-axis) which sets apart CD from the other phenomena, and (c) NEG, CYN, and SDR are highly similar and are not differentiated by the analysis. This is the input for step two of our analysis.

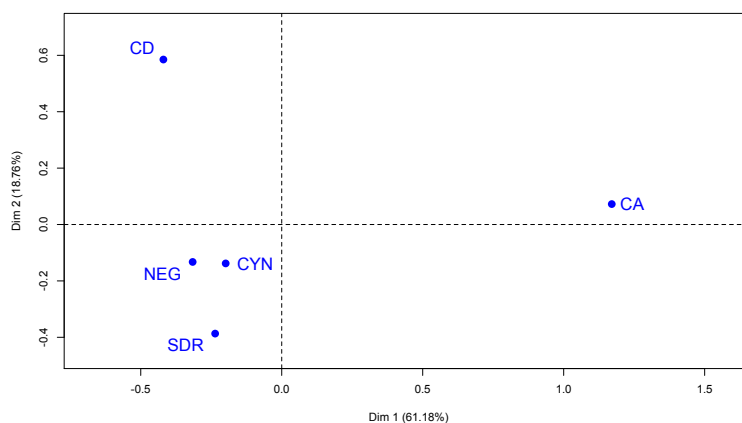


Figure 1: 2D-plot of the data in the mini-maps

## STEP TWO: THREE PARAMETERS

Based on figure 1 and the existing theoretical literature on these phenomena, we propose the following three syntactic parameters:

- (4) **AgrC-parameter:** *Dialects {have/do not have} unvalued  $\phi$ -features on C*

This parameter accounts for the presence or absence of CA. We argue that CA is the overt reflex of unvalued  $\phi$ -features on C undergoing Agree with the subject (van Koppen, to appear).

- (5) **D-parameter:** *Pronominal D has: (i) an Edge Feature (EF) or (ii) no EF*

This parameter accounts for the presence or absence of CD. We assume the pronominal structure proposed by Déchaine and Wiltschko (2002) and follow van Craenenbroeck and van Koppen (2008)’s analysis of clitic doubling: a clitic-doubled subject starts life as a big DP (Uriagereka (1995); Poletto (2008)) and clitic doubling is the result of  $\phi$ P-movement to specDP. This movement is triggered by an EF on pronominal D.

- (6) **PolP-parameter:** *Dialects {have/do not have} a PolP in the clausal left periphery.*

This parameter accounts for the presence or absence of NEG, SDR, and CYN. We argue that the negative clitic *en* occupies a high left peripheral Polarity head (van Craenenbroeck, 2010). Dialects with *en* have this head, whereas the other dialects do not. We follow van Craenenbroeck (2010)’s analysis of SDRs as involving TP-ellipsis licensed by this same Pol-head, as well as his analysis of CYN as a further ellipsis of SDRs.

## STEP THREE: DISTRIBUTION OF PARAMETER VALUE COMBINATIONS

At first sight, the parameters in (4)–(6) are microparameters in Baker (2008)’s sense. Moreover, they are logically independent, and so we would expect the eight possible parameters value combinations to be distributed more or less evenly across dialects.

As the table in figure 2 shows, however, this is far from true: 86% of the dialects

	+AGRC		–AGRC	
	+POLP	–POLP	+POLP	–POLP
–D <sub>[EF]</sub>	9 (3%)	77 (28%)	3 (0.01%)	65 (24%)
+D <sub>[EF]</sub>	68 (25%)	1 (0.003%)	25 (9%)	19 (7%)

Figure 2: Distribution of the 8 parameter value combinations across 267 Dutch dialects

(the green-colored cells) have the same value for the D- and the PolP-parameter. Following Baker (2008) we take this bimodal distribution to signal that we are dealing with an underlying bigger parameter of which D and PolP are mere epiphenomena. To scale down Baker (2008)’s terminology: while (4) is a nanoparameter (determined by a specific feature value on an individual functional head), (5) and (6) should be taken together into a microparameter, which transcends individual heads. We propose to formulate it as a parametrization of Cinque and Rizzi (2009)’s “one feature one head”-principle. Languages that have a positive setting for this principle have an extended left periphery, both in the nominal (cf. (5)) and in the clausal (cf. (6)) domain, while languages with a negative setting lack such functional space in both domains.

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# The Real(is) Distinction in *Before* and *After* Clauses: A Crosslinguistic Study

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Based on data from Korean, Turkish, Polish, and Romance, we argue that many attested distinctions between clausal *before* and *after* can be reduced to selection of a complement that is specified as [−realis] for *before* and [+realis] for *after*. We propose that [±realis] accounts for the difference in veridicality between *before* and *after* (agreeing with Anscombe 1964) by subsuming the proposals about the interactions of tense (Ogihara 1996, Sharvit 2013, i.a.), phrasal/clausal distinctions (Penka and von Stechow 2009), and mood distinctions (Giannakidou 2009, i.a.). Furthermore, we show that it is mood selection that plays a role in the availability of Geis-ambiguity (Geis 1970), not relativization alone (Sharvit 2013), as the accessibility of the low reading in temporal clausal PPs is closely tied to [+realis].

**Data.** Despite the apparent cross-linguistic variation in marking the complement of clausal *before*, languages are consistent in selecting irrealis mood. Romance languages and Greek use subjunctive (Arregui and Kusumoto 1998). Korean employs a nominalizer *-ki* (1) that also appears with non-veridical complements (Han 1996). Turkish uses *-ma/-me* (2), which is an affix that is syncretic between the non-factive nominalizer and negation (Kornfilt 1997; both of which fit our analysis).

- (1) John-un [ Mary-ka tochakha **-ki** ceney ] ttena-ss-ta (K)  
John-TOP Mary-NOM arrive *-ki* before leave-PAST-DEC

- (2) John [ Mary gel **-me** -den önce ] git-ti. (T)  
John Mary come *-me* -ABL before go-PAST  
“John left before Mary arrived.”

In *after*-clauses, although all languages employ different strategies, the choice of realis mood seems to be consistent. Korean (3) uses the realis relativizer *-n* (An 2014), Romance uses indicative, and Turkish (4) uses the factive nominalizer *-DIG* (Kornfilt 1997).

- (3) John-un [ Mary-ka tochakha **-n** hwuey ] ttena-ss-ta (K)  
John-TOP Mary-NOM arrive *-n* after leave-PAST-DEC

- (4) John [ Mary gel **-dik** -ten sonra ] git-ti. (T)  
John Mary come *-DIG* -ABL after go-PAST  
“John left after Mary arrived.”

***Before* vs. *after* as [±realis].** Yoon (2011) observed that [−realis] licences what she calls “evaluative negation”, which is associated with a conventional implicature (Potts 2005). Crucially, such negation appears in *before* clauses (5) but not in *after* clauses (6).

- (5) a. John-i [ Mary-ka tochakha **-(cianh)** -ki ceney ] cipecy iss-ess-ta (K)  
John-TOP Mary-NOM arrive -NEG *-ki* before home be-PAST-DEC (P)

- b. Jan był w domu [ zanim Maria (**nie**) przyjechała ].  
Jan was at home before Mary NEG came  
Intended: “John was at home before Mary arrived.”

- (6) a. John-un [ Mary-ka tochakha **-(*\*cianh*)** -n hwuey ] ttena-ss-ta (K)  
John-TOP Mary-NOM arrive -NEG *-n* after leave-PAST-DEC

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- b. Jan był w domu [ po tym jak Maria (**\*nie**) przyjechała ]. (P)  
 Jan was at home after this when Mary NEG came  
 Intended: “John was at home after Mary arrived.”

In Polish and Korean, negation is optional, but in Turkish it is obligatory, (7).

- (7) John [ Mary gel **-(me)** -den önce ] git-ti (T)  
 John Mary come -NEG -ABL before go-PAST

We argue that the reason for this is that this negation in Polish or Korean is *licensed* by [−realis], but Turkish negation indicates [−realis] *itself*. This makes it syntactically higher than the modal *-(y)Abil* “can”, which is why (8) is ungrammatical (but would be fine in the order MODAL-NEG).

- (8) \*John [ Mary gel **-me -yebil** -den önce ] git-ti (T)  
 John Mary come -NEG -MODAL -ABL before go-PAST

In contrast to the use of negation, subjunctive, irrealis relativizers, and non-factive nominalizers in *before* clauses, *after* clauses make use of indicative, realis relativizers, and factive nominalizers, which shows that [ $\pm$ realis] is the relevant contrast.

**Geis-ambiguity is about marking [+realis].** Our proposal extends to the cross-linguistic variation in availability of Geis-ambiguity (Larson 1990, Sharvit 2013): the English example in (9) is ambiguous between two possibilities for the time of John’s watering the flowers: either right before Mary’s saying (high reading), or right before the claimed time of her arriving (low reading).

- (9) John watered the flowers right before Mary said (that) she arrived.

Sharvit (2013) argues that the availability of this ambiguity depends on the type of embedding: clausal *before* often does not allow an ambiguous reading, but a relativization such as *before the time at which*, does. We argue that the crucial difference is not relativization but mood. The ambiguity can only be obtained with [+realis], which entails the truth of the embedded proposition. In Korean, the [−realis] relativizer *-l* on *say* cancels out the low reading, but with the [+realis] relativizer *-n* the low reading is accessible. (Note that in (10), *before* is phrasal, not clausal, so the appearance of [+realis] is not a problem for our proposal):

- (10) John-un [ Mary-ka [ tochakhayss-ta-ko ] malha -{**n/l**} sikan palo ceney ] kkochey  
 John-TOP Mary-NOM arrived-DEC-C say -REL time right before flower  
 mwulul cwuessta. (K)  
 water gave

Similarly, in Polish (11) the low reading is not available if *say* is marked with subjunctive, i.e. [−realis] (see also Sharvit 2013 for the same facts from Spanish).

- (11) Jan podlał kwiaty [ zaraz zanim Maria **powiedziałaby** [ że przyjechała ]]. (P)  
 John watered flowers right before Mary said.SUBJ that arrived.IND

Interestingly though, with subjunctive both on *say* and *arrive*, the low reading is accessible, (12).

- (12) Jan podlał kwiaty [ zaraz zanim Maria **powiedziałaby** [ że **przyjechałaby** ]]. (P)  
 John watered flowers right before Mary said.SUBJ that arrived.SUBJ

This novel observation is consistent with our proposal and we suggest that in (12), the truth values must be preserved across two doxastic alternative worlds, which has a parallel effect to (10), where no alternative worlds have to be considered.

### Speech Acts, Root Phenomena and Truncation

**Introduction:** Krifka (2014) argues that illocutionary acts can be embedded in certain circumstances, one of them being under predicates that allow root phenomena (see Heycock 2006) such as argument fronting, as in (1). Krifka proposes a semantics that allows speech acts to be embedded under lexical predicates that can select for asserted clauses.

(1) Carl told me that [this book, it has recipes in it]. (Krifka 2014:61)

In this paper I argue that Krifka's analysis fits more naturally with a truncation analysis (TRN) for restrictions on embedded root phenomena (McCloskey 2006, Haegeman 2006, de Cuba 2007, Bentzen et al. 2007, de Cuba & Ürögdi 2009, a/o), than with operator movement (OM) accounts (Haegeman & Ürögdi 2010, Haegeman 2012, a/o). In addition, I propose a slight modification of Krifka's system, expanding out from "assertion" to better fit the data.

**Krifka's system:** Krifka (2014) proposes that there are *sentence radicals*, which denote propositions, and *speech acts*, which are formed when illocutionary operators are applied to sentence radicals. He argues that speech acts are distinct from regular semantic objects and that this greatly restricts (but does not completely rule out) the embedding of speech acts. For Krifka, sentence radicals do not involve illocutionary force. He also notes that sentence radicals have more syntactic restrictions, citing examples of embedded root phenomena (Heycock 2006) being restricted to contexts following predicates which typically embed clauses with illocutionary force operators. He notes that the three speech act operators he discusses (ASSERT, QUEST and DIRECT) are often grammaticized in languages. Focusing here on ASSERT, Krifka sees an assertion as a speech act in which the speaker takes on the social commitment that the content of the assertion is true (i.e. to be included in the common ground). He argues that in a speech act the speech act operator ASSERT is added to a sentence radical.

**Truncation vs. Operator Movement:** TRN and OM accounts have been proposed to account for differences in the availability of root phenomena like argument fronting (AF) under non-asserted (2a) vs. asserted (2b) predicates (see Hooper & Thompson (1973) for discussion).

- (2) a. \*Mary realizes that this book, John read. (Haegeman 2012:257)  
b. Mary believes that this book, John read.

While TRN analyses differ in implementation, they share the intuition that embedded root clauses like (2b) have an extra syntactic projection (an extra CP, a ForceP, or similar type projection), as in (3b), that is tied to illocutionary force. Embedded clauses that do not allow root phenomena (2a) are argued to be impoverished, lacking this extra projection (3a) and thus lacking landing sites required for root phenomena like AF.

- (3) a. [CP] / [FinP]                      b. [CP [CP]] / [ForceP [FinP]]

On the other hand, OM accounts claim that in embedded clauses that disallow root phenomena (2a) there is relative clause type OM, as in (4), which causes intervention effects that block embedded root phenomena.

- (4) [CP OP<sub>i</sub> C... [FP t<sub>i</sub> [TP... ]]] (Haegeman & Ürögdi 2010)

In other words, the truncation account proposes that there is extra syntactic structure needed to facilitate AF while the operator movement account proposes that an extra syntactic movement is necessary to block AF. I argue that TRN analyses fit with Krifka's (2014) semantic analysis better, as the semantic complexity of "asserted" speech act clauses is matched by syntactic complexity in the truncation account, providing a cleaner compositional match between the syntax and semantics. On the other hand, in the OM account Krifka's

semantically less complex sentence radicals would be more syntactically complex, and semantically more complex speech acts would be syntactically less complex, an unexpected compositional result.

**Another Truncation Advantage:** While Haegeman's (2012) OM account focuses mostly on AF restrictions in clausal complements to verbs (and adverbial clauses, which I will not discuss in detail here for space reasons), she briefly speculates on a possible OM account for so-called "complements of N" (NCCs), and notes that they generally disallow AF, as in (5b,d).

- (5) a. I resent the fact that he had to examine each part carefully.  
 b. \*I resent the fact that each part he had to examine carefully.  
 c. The claim that a portrait of Mao hangs on the wall is still unsubstantiated.  
 d. \*The claim that on the wall hangs a portrait of Mao is still unsubstantiated.  
 (Hooper & Thompson 1973:479,486)

For clausal complements of V (VCCs), we've seen that Haegeman (2012) argues that event operator movement (EOM) blocks AF in factive complements in sentences like (2a), and the lack of this EOM allows AF in (2b). Haegeman (2012:273) cites Nichols (2003) in support of her speculative OM proposal for NCCs. Nichols proposes that NCCs are formally relative clauses, and argues that these structures involve event operator relativization, as in (6).

- (6) [DP The claim<sub>i</sub> [CP Ø<sub>i</sub> [that [IP Sonia [e<sub>i</sub> [had bought the lottery ticket]]]]]] (Nichols 2003)

For Nichols, all attitude nominals (*fact*, *claim*, *belief*, etc.) both factive and non-factive, involve EOM. On the other hand, Haegeman (2012) cites as predecessors to the EOM account in VCCs both Aboh (2005), who claims that EOM results in factivity, and Melvold (1986, 1991), who claims that complements of factive predicates are "event arguments" that contain an operator in CP licensed by the functional element *definiteness* which binds "an open event-position". Note that there is a mismatch here between when we see EOM in NCCs vs. VCCs. The interpretation of the complement clause is not factive or definite in the NCC example in (5c), given the non-factive nature of the head noun *claim*, yet AF is still blocked in (5d). In other words, in order to block AF in NCCs we would need to follow Nichols and propose OM for all attitude nominals, including non-factives. However, in order to account for the root phenomena facts in VCCs we would need to propose EOM in factive VCCs to block AF but no EOM in non-factive VCCs to allow AF. Of course one could propose that there are two different operators at work in NCCs and VCCs that appear for different semantic reasons, but this would need to be spelled out. On the other hand, in a TRN account following the semantic analysis of Krifka (2014), the non-asserted status of all NCCs would mean no extra structure, correctly allowing AF in (2b) and ruling out AF in (5b,d) with only one semantic notion needed. I see this as another advantage for TRN analyses over OM.

**Fixing a Problem with Assertion:** As discussed above, the general nature of the assertion analysis of Krifka (2014) is attractive in that it captures the class of embedded clauses that allow root phenomena under the umbrella of a single general semantic notion. However, the notion may need to be expanded to be broader than assertion. Krifka notes that embedded clauses under predicates like *believe* and *think* in (7) are not necessarily asserted by the speaker.

- (7) Trump *thinks/believes* that diplomacy is easy (but I think it isn't).

In addition, embedded verb-second (another root phenomena) has been shown by Wiklund et al. (2009:1924-5) to be possible in complements to semifactive verbs, and they report that the complement remains presupposed (and crucially, not asserted), as in their example in (8).

- (8) Vi upptäckte faktiskt inte att den bloggen läste han inte varje dag. [Swedish]  
 we discovered actually not that that blog-the read he not every day  
 "We actually didn't discover that this blog he didn't read every day."

Thus, it is not clear that “assertion” fully captures the patterns of embedded root phenomena. I propose instead that the extra structure appears in *non-referential* clauses, defined in (9).

(9) **Non-referential CP:** a speech act which introduces a proposition (or an open question) which is not yet accepted (or pre-established) in the existing discourse.

This definition includes asserted clauses, but does not necessarily rule out non-asserted (7) or presupposed (8) clauses from allowing root phenomena. As far as I can tell, this change would not require a major change in Krifka’s (2014) analysis, but would fit the data better.

**References:** Haegeman 2012. *Adverbial Clauses Main Clause Phenomena and the Composition of the Left Periphery*. OUP. Haegeman 2006. Conditionals factives and the left periphery. *Lingua*. Krifka 2014. Embedding illocutionary acts. In: *Recursion: Complexity in cognition*. Hooper & Thompson. 1973. On the applicability of root transformations: *L.I.* Heycock 2006. Embedded root phenomena. *Blackwell companion to syntax*. Blackwell.

## A Compositional Semantics for Turkish Correlatives

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**Introduction.** In this paper, I provide a compositional semantics for the correlative construction in Turkish extensively discussed in Iatridou (2013). The analysis I argue for is based on Rawlins (2013) which attempts to unify the semantics of conditionals and unconditionals.

**Problem.** Iatridou argues that (1) exemplifies correlatives in Turkish. The correlative clause (CC) is a clausal adjunct in the left periphery and can be followed by a *demonstrative* proform in the matrix clause, which are characteristic properties of *correlative syntax* which has been argued to be the syntax of correlative *relativization* strategy in (2) and *if-then* conditionals (Lipták 2009). In that respect, (1) might qualify as having *correlative syntax* as Iatridou argues to be the case. The Turkish example in (1) indeed shares these properties with Hindi correlatives (2).

- (1) [cc John ne pişir-se], Mary onu ye-r  
J what cook-COND M DEM.ACC eat-MOD

“Mary eats whatever John cooks.”

- (2) [cc jo laRkii khaRii hai] vo lambii hai  
REL girl standing is DEM tall is

‘The girl [who is standing] is tall.’

(Srivastav, 1991)

Besides identifying (1) as having the correlative syntax, Iatridou conjectures that the CC in Turkish should denote a predicate so that the semantics of Turkish correlatives parallels what Srivastav proposes for Hindi correlatives (2). To get a predicate out of a CC, the CC by assumption should involve predicate abstraction (3a). Iatridou does not spell out her proposal but we can imagine that a (null) universal quantifier (3b) or the  $\iota$  operator (3c) is taking the CC as an argument.

- (3) a. [correlative clause] =  $[\lambda y. y \text{ is inanimate. John cooks } y]$   
b. (1) = 1 iff  $\forall x [\text{John cooks } x \rightarrow \text{Mary eats } x]$   
c. (1) = 1 iff  $[\lambda x. \text{Mary eats } x](\iota[\lambda y. \text{John cooks } y])$

In this paper, I argue that the denotation of the CC in Turkish is never a predicate (3a) and that the CC does not behave on a par with a quantificational phrase (3b) or a definite description (3c). The core surface observation is that the CC in Turkish requires the suffix that also marks conditional antecedents and makes use of wh-words that are used in wh-questions (wh-words are not used in relativization or as indefinites). Hindi correlatives, on the other hand, are clearly relative clauses and make use of a relative pronoun in their composition (Srivastav, 1991). (Note that my proposal for Turkish correlatives is still compatible with Iatridou’s main claim that they exhibit *correlative syntax*, which does not implicate any particular semantics).

**Proposal.** I adopt the analysis for English unconditionals in Rawlins (2013). I take (1) to have the paraphrase in (4a), which Rawlins analyzes as a conjunction of conditional statements as in (4b).

- (4) a. No matter what John cooks, Mary eats it.  
b.  $\{\text{If John cooks pizza, Mary eats it} \wedge \text{If John cooks lasagna, Mary eats it} \wedge \dots\}$

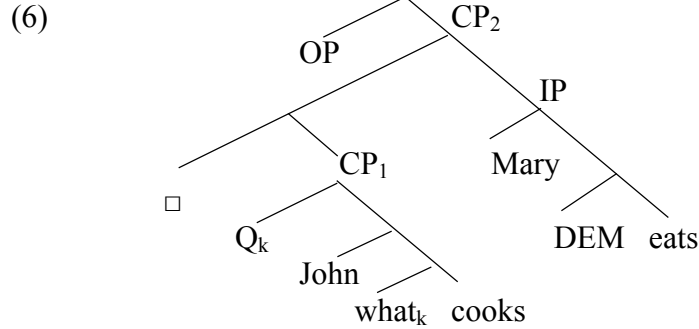
In this analysis, the only difference between conditionals and correlatives would be whether a singleton set of propositions or a non-singleton set of propositions restricts the modal (Hamblin 1973; Kratzer & Shimoyama 2002; Rawlins, 2013). If we take the CC to denote a non-singleton set of propositions that pointwise restrict a modal, we capture the striking parallelism between a CC and a conditional antecedent in (5).

- (5) a. [John ne pişir-se], Mary onu ye-r  
J what cook-COND M that eat-□

“Mary eats whatever John cooks.”

b. [John            makarna            pişir-se],            Mary    onu            ye-r  
          J            pasta            cook-COND            M        that            eat-□  
 “If John cooks pasta, Mary eats it.”

To generate a non-singleton set of propositions out of the CC is straightforward. It already has the syntax and semantics of wh-questions in Turkish (see (i) in Predictions). Hence, I take the denotation of the CC in (5a) to be  $[\lambda p. \exists x. p = \lambda w'. \text{John cooks } x \text{ in } w']$  rather than (3a). Finally, the LF for (5a) will look like in (6).



DEM will be an assignment-dependent e-type pronoun = [the unique max entity John cooks in  $w'$ ] (Heim & Kratzer, 1998). The necessity modal ( $[[\Box]]^c = \lambda p. \lambda q. \lambda w. \forall w'' \in F_c(w) [p(w'') \rightarrow q(w'')]$ ) will pointwise take each of the propositions in the denotation of  $CP_1$  and then take the singleton set of propositions that IP denotes ( $\lambda w'. \text{I eat the [the unique max entity John cooks in } w'] \text{ in } w'$ ).  $CP_2$  will be a set of propositions  $\{[\lambda w. \forall w'' \in F_c(w) [\text{Mary cooks pizza in } w'' \rightarrow \text{I eat (the unique max entity John cooks in } w'') \text{ in } w']], [\lambda w. \forall w'' \in F_c(w) [\text{Mary cooks lasagna in } w'' \rightarrow \text{I eat (the unique max entity John cooks in } w'') \text{ in } w']], \dots\}$  and finally the assertion OP ( $\lambda P_{\langle st, t \rangle}. \lambda w. \forall p [P(p) \rightarrow p(w)]$ ) will assert these propositions in the evaluation world.

**Predictions.** This analysis of Turkish correlatives predicts several facts that need to be explained under the analysis that the CC denotes a predicate and combines with  $\iota$  or  $\forall$ : **i.** The CC patterns with a wh-question with respect to the scope freedom of in-situ wh-words, the relative scope of multiple wh-words (Richards, 2010), the set of wh-words available to these constructions, focus-intervention facts (Beck, 2006; Cable, 2010), the availability of ‘aggressively non-D-linked wh-phrases’ (Pesetsky, 1987). **ii.** Conditionals and correlatives exhibit full parallelism with respect to the morphology that co-varies with their interpretation (e.g. counterfactual vs. non-counterfactual). **iii.** The CC also differs from a quantification phrase in that a universal QP cannot scope above negation but a CC has to scope above negation (expected under the conditional analysis) and furthermore a universal QP is subject to the Epistemic Containment Principle (von Stechow and Iatridou, 2003) while a CC is not. **iv.** The demonstrative is only a syntactic need since the CC is a clausal adjunct and cannot be in the argument position, unlike English free relatives. If there is no theta position in the matrix clause that “refers to” the CC, we simply predict to find an unconditional “Lit: [John what do-COND], Mary gets angry at me.” that is interpreted as “No matter what John does, Mary gets angry at me.” This is attested. In conclusion, the correlative construction in Turkish compositionally exploits the semantics of wh-questions and conditionals, which is reflected in its morpho-syntax. Hence, if the compositional semantics this paper offers is on the right track, a possibility of bifurcation in the cross-linguistic typology of correlatives arises.

**Selected References:** Iatridou, S. 2013. Looking for Free Relatives in Turkish (and the unexpected places this leads to). The Proceedings of WAFL 8. Lipták, A. 2009. *Correlatives Cross-Linguistically*. Rawlins, K. 2013. (Un)conditionals. *Natural Language Semantics* 40: 111-178. Srivastav, V. 1991. The Syntax and Semantics of Correlatives. *NLLT* 9: 637– 686.

## The performativity of aspect: imperfective assertions in Marathi

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**Introduction:** It is a well-observed fact about English that both present progressive (1-a) and simple present declarative sentences (1-b) are felicitous with future time reference on the “planned” or “scheduled” reading (Prince 1973; Goodman 1973; Dowty 1977; Comrie 1985; Copley 2009).

- (1) a. The Red Sox are playing/?defeating the Yankees next week. PRES(PROG( $\phi$ ))  
b. The Red Sox play/?defeat the Yankees next week. PRES( $\phi$ )

The difference in the futurate readings associated with the two constructions has been said to involve degree of certainty; i.e. for any future-oriented proposition  $\phi$ , PRES( $\phi$ ) implies a greater degree of certainty regarding the occurrence of  $\phi$  than PRES(PROG( $\phi$ )) (Dowty 1977; Prince 1973).

In Marathi (Indo-Aryan), a language with both progressive and imperfective morphology, present imperfective sentences provide the translational equivalent of English simple present sentences, indicating some semantic similarity in their logical form. Moreover, comparable to English, both present progressive (2-a) and present imperfective (2-b) sentences exhibit futurate readings. However, Marathi futurates contrast with their English counterparts in a striking way: Rather than giving rise to a planned/scheduled reading with a greater degree of certainty as in English, PRES(IMPF( $\phi$ )) is felicitous on a futurate reading only if  $\phi$  is **not** already scheduled, planned or otherwise determined in the pre-assertion context. To illustrate, in a context in which the move out of this house has already been decided upon by/for the speaker, she cannot use (2-b) to report it. Only (2-a) is appropriate in such a context. The use of (2-b) has a performative effect; its utterance changes the world by committing the speaker to act in accordance with the content of the future-oriented proposition, i.e. to ensure the coming about of the future situation it describes. (2-a), in contrast, can only be used reportatively: i.e. to report a pre-assertion commitment of the agent.

- (2) a. *Mi udyā he ghar soḍ-toy* PRES(PROG( $\phi$ ))  
I tomorrow this house-NOM leave-PROG.PRES.M.SG  
I am leaving this house tomorrow. (*it has already been decided*)  
b. *Mi udyā he ghar soḍ-to* PRES(IMPF( $\phi$ ))  
I tomorrow this house-NOM leave-IMPF.PRES.M.SG  
I will leave this house tomorrow. (*I am deciding as I speak*)

Depending on context, PRES(IMPF( $\phi$ )) utterances have a range of performative effects: they can be interpreted as taking on personal commitments, offers or promises, or as threats. The performative use of future-oriented PRES(IMPF( $\phi$ )) sentences restricts their felicitous usage to first person subjects. There is no such restriction on present-oriented PRES(IMPF( $\phi$ )) assertions, which give rise to habitual/generic and continuous readings. PRES(PROG( $\phi$ )) sentences carry no person restrictions regardless of present or future orientation.

This paper offers an assertoric account of the performative effect associated with the use of imperfective marking in Marathi. The effect is analyzed as arising indirectly from imperfective assertions as a contextual inference rooted in the aspectual semantics and division of labor between the operators PROG and IMPF. The absence of the performativity effect in English is attributed to the absence of a morphologically overt PROG–IMPF distinction.

**Analysis:** Future-oriented present tense sentences have been taken to require the notion of a “preparatory planning stage”, which holds at reference time. This notion is concretized here in the form of the PLAN operator (based closely on the framework presented in Condoravdi & Lauer

2009, 2011), which both  $\text{PRES}(\text{PROG}(\phi))$  and  $\text{PRES}(\text{IMPF}(\phi))$  assertions contain in their logical form. Let  $\text{Hist}_t(w)$  stand for historical alternatives of  $w$  at (a final subinterval of)  $t$  and  $\text{Dox}_t^a(w)$  stand for the doxastic alternatives of an agent  $a$  at world  $w$  and at (a final subinterval of)  $t$ . Let  $<_w^a$  stand for a preference or likelihood based ranking on possible worlds relative to  $a$ . Then, given a predicate of eventualities (i.e. sentence radical)  $\phi$ :

$$(3) \quad \llbracket \text{PLAN}(a)(\phi) \rrbracket = \lambda t \lambda w. \forall w' \in \text{Dox}_t^a(w) : \forall v, u \in \text{Hist}_t(w') : v \in \phi \wedge u \notin \phi \rightarrow v <_w^a u$$

That is,  $\phi$  is planned according to  $a$  in  $w$  at  $t$  iff in every  $w'$  compatible with  $a$ 's beliefs at  $t$  in  $w$ , every world among  $w'$ 's historical alternatives in which  $a$  ensures that  $\phi$ , is ranked higher than any world in which  $a$  does not ensure that  $\phi$ . Note that  $a$  is not always identified with the speaker or the subject referent; examples like *The plane leaves at 4 PM* (Kaufmann 2005) and *The Rosenbergs die tomorrow* (Dowty 1977), are naturally interpreted as reporting the commitments of agents other than the speaker or the subject. PROG and IMPF, when they give rise to future reference, do not combine directly with predicates of eventualities  $\phi$  but with  $\text{PLAN}^a\phi$  predicates of the type in (3), i.e. *ist*, and yield world-time predicates which are instantiated at **now** by PRES (4).

$$(4) \quad \text{PRES: } \lambda P_{ist} \lambda w. P(\mathbf{now})(w)$$

The contribution of PROG and IMPF is as in (5) and (6), with COIN defined in (7). This is a simplified variant of the proposal in Deo (2009) characterizing the PROG–IMPF contrast that factors out the meaning component necessitated for deriving habitual/generic readings.

$$(5) \quad \text{PROG: } \lambda P_{ist} \lambda t \lambda w. \text{COIN}(P, t, w)$$

$$(6) \quad \text{IMPF: } \lambda P_{ist} \lambda t \lambda w. \exists t' [t \subseteq_{ini} t' \wedge \text{COIN}(P, t', w)]$$

$$(7) \quad \text{COIN}(P, t, w) = \begin{cases} \exists e [P(w)(e) \wedge t \subset \tau(e)] & \text{if } P \subseteq \mathcal{E}^E \text{ or } P \subseteq \mathcal{E}^S \\ P(t)(w) & \text{otherwise} \end{cases}$$

The logical form of  $\text{PRES}(\text{PROG}(\text{PLAN}^a\phi))$  and  $\text{PRES}(\text{IMPF}(\text{PLAN}^a\phi))$  assertions will be as in (8) and (9). A progressive future-oriented assertion is true at a world  $w$  iff some agent  $a$ 's beliefs at utterance time commit her to rank (and ensure) future  $\phi$ -worlds over  $\neg\phi$  worlds among otherwise equivalent alternatives. In contrast, an imperfective future-oriented assertion is true at  $w$  iff  $a$ 's beliefs at **some superinterval** continuing the utterance interval, lead to the same commitment.

$$(8) \quad \lambda w. \forall w' \in \text{Dox}_{\mathbf{now}}^a(w) : \forall v, u \in \text{Hist}_{\mathbf{now}}(w') : v \in \phi \wedge u \notin \phi \rightarrow v <_w^a u$$

$$(9) \quad \lambda w. \exists t' [\mathbf{now} \subseteq_{ini} t' \wedge \forall w' \in \text{Dox}_{t'}^a(w) : \forall v, u \in \text{Hist}_{t'}(w') : v \in \phi \wedge u \notin \phi \rightarrow v <_w^a u]$$

**The performative effect** in Marathi comes about as a result of this subtle but clear distinction between PROG and IMPF assertions. Informally, if  $\text{PLAN}^a\phi$  holds **now** in  $w$ , i.e. if  $a$  is already committed to ensuring the truth of  $\phi$  at utterance time, then by the quantity maxim, the PROG assertion, being stronger, is the preferred grammatical means for communicating this fact. The IMPF assertion conventionally conveys that  $a$  is committed to ensuring the truth of  $\phi$  at some superinterval of **now** in  $w$  but conversationally implicates by the pragmatic blocking principle that this commitment is not already in effect at **now** [since if it had been, then the speaker would have used the stronger PROG form]. The resulting inference is that the commitment doesn't exist at utterance time but *comes into being* after the utterance time. This gives rise to the performative effect of the IMPF assertion, which must be interpreted as changing the world by adding a new fact – the undertaking of a commitment to ensure that  $\phi$ . In most contexts, the speaker can only undertake a commitment to ensure that  $\phi$  if she has control over  $\phi$  – hence the restriction to first person subjects (modulo contextual exceptions, which will be discussed in the talk).

Finally, English fails to exhibit the performativity effect precisely because it does not morphologically realize IMPF. In English future-oriented present tense sentences, PRES (4) directly combines

with  $\text{PLAN}^a\phi$  predicates, which result is logically indistinguishable from  $\text{PRES}(\text{PROG}(\text{PLAN}^a\phi))$  sentences on this analysis. The division of labor and pragmatic blocking that characterizes Marathi PROG-IMPF relations is absent here and so is the emergent performativity effect.

## Varying circumstances of evaluation and the *ser/estar* distinction in Spanish

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**Introduction:** Previous work on the distributional profiles of the Spanish copulas *ser* and *estar* has demonstrated that appeal to conceptual distinctions such as temporary/non-essential vs. permanent/essential properties does not capture the full range of data. Alternative analyses have sought instead to capture the distribution in terms of the stage-level/individual-level contrast (Arché 2006, Fernald 2000), an aspectual (im)perfectivity-based contrast (Luján 1981, Roby 2007), and more recently, a specificity contrast (Maienborn 2005). On this last analysis, which is the semantically most explicit one available, *estar* is endowed with a **specificity presupposition**: the state introduced by *estar* must be related to a specific discourse situation. Notably, the implementation of the presupposition is said to have a pragmatic effect such that *estar* sentences often give rise to “quasi-exhaustive” inferences in context – as restricted claims that may not hold in temporally, spatially, or epistemically different situations. Although it crucially relies on the notion of a specific discourse situation, Maienborn’s work offers no formalization of the notion nor clarification about how specific discourse situations are accessed. In this paper, we offer an explicit formal analysis for *estar* that associates with it a presupposition regarding varying circumstances of evaluation. Specifically, *estar* presupposes that the embedded proposition is false at at least some evaluation indices that are **accessible** (in a way to be made precise) from the given circumstance of evaluation at which the proposition is asserted to hold. *ser* remains neutral on this issue.

**Observations:** The standard generalizations are that *estar* is overwhelmingly used with locative predicates (1-a), *ser* with nominal predicates (1-b). Adjectival predicates, sometimes, but not always, may combine with either copula, and this gives rise to differing interpretations (1-c-d). Further, individual-level adjectives such as those in (1-e-f) typically appear with *ser*. Native speakers, when presented with these in combination with *estar* in isolation, find them unacceptable.

- (1) a. La silla *#es/está* en la cocina. ‘The chair **#ser/estar** in the kitchen.’  
b. El joven *es/\*está* (un) arquitecto. ‘The young man **ser/\*estar** an architect.’  
c. Juan *es/está* guapo/avispado. ‘Juan **ser/estar** (*is/is looking*) handsome/quick-witted.’  
d. El reportero *es/está* sucio. ‘The reporter **ser/estar** is dirty-minded/dirty.’  
e. La carretera *es/#está* ancha. The road **ser/#estar** wide.  
f. Las escaleras *son/#están* peligrosas. The stairs **ser/#estar** dangerous.

In addition to these basic generalizations, it has been noted (Maienborn, Clements) that the use of *estar* with individual-level predicates becomes acceptable when the speaker wishes to convey that a property (whose incidence in an individual might ordinarily be considered temporally stable) holds of an individual in a restricted way – in either a temporal sense (2) or a spatial sense (3).

- (2) a. **Context:** Pedro went on a diet for six months. I just saw him yesterday.  
b. *El está delgado.* ‘He **estar** skinny’ [now].
- (3) a. **Context:** A journalist reporting on the Panamericana has now arrived near Lima.  
b. *La carretera está ancha.* (Maienborn 2005) ‘The road **estar** wide’ [here].

The use of *estar* is also felicitous with individual-level predicates when reporting sensorial experiences and subjective evaluations (4). Its use in such contexts often suggests that the speaker thinks that the degree to which a gradable property is exhibited in the entity is unexpectedly high.

- (4) a. **Context:** I have just come back from the market.  
b. *He comprado unas mandarinas que están riquísimas!* (Clements 2006:188)

‘I have just bought some mandarins that **estar** delicious’.

Another use of *estar*, not noted in previous literature, is to signal that the speaker “is allowing” for an entity to be in the positive extension of a gradable predicate by lowering the contextual standard.

- (5) a. **Context:** Juan is from Madrid and used to seeing really tall skyscrapers. He visits Segovia where the buildings are not as tall. His host points to building after building to determine what “counts” as tall for Juan. For one building that is taller than the others but not as tall as a Madrid skyscraper, John concedes:  
 b. Vale, ese edificio *esta* alto. ‘OK, this building **estar** tall.’

We propose that what unifies all the various uses of *estar* is that each of these uses exhibits sensitivity to *some* parameter of the *evaluation index* (= Kaplanian circumstance of evaluation). The *ser/estar* puzzle is then solved by formally modeling this parametrized sensitivity for *estar*.

**Analysis:** Let an evaluation index  $i$  be a tuple  $\langle t, w, l, c \rangle$ , where  $t$  is an interval,  $w$  is a world,  $l$  is a location, and  $c$  is a contextual-standard function which assigns to every gradable predicate  $P$  a standard that determines the positive extension of  $P$ . Both *ser* and *estar* combine with a property denoting expression  $P$  and an individual denoting argument  $x$  and assert that  $\llbracket x \rrbracket^i \in \llbracket P \rrbracket^i$ . We say that a proposition of the form  $P(x)$  holds **contingently** at an index  $i$  whenever there is an  $i'$  accessible from  $i$ , varying *only* along one contextually-determined parameter, such that  $P(x)$  is false at  $i'$ . Such minimally different pairs in the accessibility relation are written as  $R_p(i, i')$ , with contingency for the different parameters  $p$  defined in (6). *time*, *location* etc. are functions that apply to an index and return the value for the relevant parameter for that index.

- (6) a.  $\forall i, i' : R_t(i, i') \leftrightarrow \text{time}(i) \supset \subset \text{time}(i')$   
 An index  $i' (\langle t', w, l, c \rangle)$  is **temporally** accessible from  $i (\langle t, w, l, c \rangle)$  iff the temporal interval  $t'$  of  $i'$  abuts the temporal interval  $t$  of  $i$  ( $t'$  is immediately before or after  $t$ ).  
 b.  $\forall i, i' : R_l(i, i') \leftrightarrow \text{location}(i) \supset \subset \text{location}(i')$   
 An index  $i' (\langle t, w, l', c \rangle)$  is **spatially** accessible from  $i (\langle t, w, l, c \rangle)$  iff the location  $l$  of  $i'$  abuts the location  $l'$  of  $i$ . ( $l'$  is spatially adjacent to  $l$ .)  
 c.  $\forall i, i' : R_w(i, i') \leftrightarrow \text{world}(i') \in \text{Sim}(\text{world}(i))$   
 An index  $i' (\langle t, w', l, c \rangle)$  is **modally** accessible from  $i (\langle t, w, l, c \rangle)$  iff the world parameter  $w'$  of  $i'$  is among the most *Similar* worlds to the world  $w$  of  $i$ .  
 d.  $\forall i, i' : R_c(i, i') \leftrightarrow \forall P_{\text{grad}} : c'(P_{\text{grad}}) > c(P_{\text{grad}})$   
 An index  $i' (\langle t, w, l, c' \rangle)$  is **contextual-standard-wise** accessible from  $i (\langle t, w, l, c \rangle)$  iff for all gradable predicates  $P_{\text{grad}}$ ,  $c'$  of  $i'$  yields a higher standard than  $c$  of  $i$  (i.e.  $c$  allows more entities to be included in the positive extension of any  $P_{\text{grad}}$  than  $c'$ .)

*estar* presupposes that the embedded proposition holds contingently while *ser* remains neutral.

- (7) a.  $\llbracket \text{estar} \rrbracket = \lambda P_{\langle s, et \rangle} \lambda x_{\langle s, e \rangle} \lambda i_s : \exists i' [R_p(i, i') \wedge \llbracket P(x) \rrbracket^{i'} = 0]. \llbracket P(x) \rrbracket^i = 1$   
 b.  $\llbracket \text{ser} \rrbracket = P_{\langle s, et \rangle} \lambda x_{\langle s, e \rangle} \lambda i_s. \llbracket P(x) \rrbracket^i = 1$

**Application:** *estar* is used with locative predicates as in (1a) because for any  $i$  at which the locative predication holds, there is a *modally* accessible index  $i'$  (with a  $w'$  that is among worlds most similar to  $w$ ) s.t. the predication is false at  $i'$  – this satisfies *estar*’s presupposition. It is used with stage-level predicates (1c-d) and to make temporally restricted claims (2a) because for any  $i$  at which the relevant predications hold, there are *temporally* accessible indices  $i'$  s.t. the predications are false at  $i'$ . The use of *estar* in the spatial cases (e.g. 3a) is licensed by the presence of a *spatially* accessible index at which the predication is false. The use of *estar* to report sensorial experiences and extreme subjective evaluations (4) is licensed by the existence of *modally* accessible indices (with a  $w'$  compatible with the pre-experiential doxastic state of the speaker, for instance) at which

the predication is false (i.e. where the property may not hold of the subject referent to as high a degree as observed at the actual index). Finally, *estar* is licensed in cases like (5), because there is a *standard-wise* accessible index  $i'$  (with a higher standard  $c'$ ) at which the predication is false.

# A syntactic account of person/number marking in Cheyenne

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**Data and generalizations:** In Cheyenne (Algonquian; Leman 2011), there are two sets of suffixes that appear in the same position and index 1st and 2nd person plural: Set A and Set B, as shown in Table 1.<sup>1</sup> We present 5 generalizations regarding the distribution of these suffixes in turn below.

Table 1: PERSON-PLURAL SUFFIX

	Set A	Set B
1pl.ex	- <i>me(no)</i>	-( <i>no</i> ) <i>ne</i>
2pl	- <i>me</i>	-( <i>no</i> ) <i>vo</i>

Generalization #1: In the presence of both 1st person plural and 2nd person plural, 1st person plural will appear. This can be seen in (1). Moreover, both are ambiguous for the number of the 2nd person argument. This generalization is commonly referred to as evidence for a Person Hierarchy in Cheyenne and Algonquian languages (see Macaulay 2009). Generalization #2: Grammatical role is irrelevant, e.g., the lack of contrast in the person-plural suffix between (1a) and (1b).

- (1) a. Né-vóom-e-**meno**  
2-see-LOC.DIR-**1PL.EX.A**  
'You(SG/PL) saw us(EX)'
- b. Né-vóom-atse-**meno**  
2-see-LOC.INV-**1PL.EX.A**  
'We(EX) saw you(SG/PL)'

Generalization #3: The presence of a 3rd person argument triggers the Set B forms of this suffix, e.g., with 1st person in (2b) and 2nd person in (3b).

- (2) a. Né-vóom-atse-**meno**  
2-see-LOC.INV-**1PL.EX.A**  
'We(EX) saw you(SG/PL)'
- b. Ná-vóom-ó-**ne**  
1-see-DIR-**1PL.EX.B**  
'We(EX) saw her/him'
- (3) a. Né-vóom-e-**me**  
2-see-LOC.DIR-**2PL.A**  
'You(PL) saw me'
- b. Né-vóom-ó-**vo**  
2-see-LOC.INV-**2PL.B**  
'You(PL) saw her/him'

Generalization #4: The presence of a 3rd person direct object in ditransitives triggers Set B forms of this suffix with 2nd person plural forms, e.g., (4a), but not 1st person plural forms, e.g., (4b).

- (4) a. Né-méts-é-**nóvo**  
2-give-LOC.DIR-**2PL.B**  
'You(PL) gave her/him to me'
- b. Né-mét-atse-**meno**  
1-give-LOC.INV-**1PL.EX.A**  
'We(EX) gave her/him to you(SG)'

<sup>1</sup>For brevity, we exclude the inclusive-exclusive distinction within 1st person plurals in Cheyenne.

Generalization #5: In ditransitive reflexive and passive forms, the presence of a 3rd person direct object triggers Set B forms even with 1st person plural forms – compare the Set A suffix with the 1st person plural in (4b) and the Set B suffixes with the 1st person plural in (5).

- |     |    |  |    |   |
|-----|----|--|----|---|
| (5) | a. | Ná-mét-áhtsé- <b>nóne</b><br>1-give-REFL- <b>1PL.EX.B</b><br>'We(EX) gave <u>her/him</u> to ourselves' | b. | Ná-mét-ané- <b>nóne</b><br>1-give-PASS- <b>1PL.EX.B</b><br>' <u>S/he</u> was given to us(EX)' |
|-----|----|--|----|---|

**Proposal:** First, we propose a probe-goal account of AGREE (Chomsky, 2000), such that the distribution of person plural suffixes is the result of a single articulated probe that is fused for both person and number (see Coon & Bale 2014). The result of this fusion is that the probing occurs for both person and number. The probe is articulated for both person and number such that it is fully satisfied for 1st person and plural features. This thus derives the preference for 1st person plural arguments (Generalization #1).

Second, we propose that this probe can have two probing cycles (see Béjar & Rezac 2009). The first cycle involves the probing of the two structurally highest arguments, i.e both arguments in a transitive form. Since both arguments are being probed simultaneously (following Hiraiwa 2005; contra Preminger 2014), this accounts for why grammatical role is irrelevant in the distribution of these suffixes (Generalization #2).

The articulated probe and simultaneous probing derives the distribution of the 1st person plural suffix. If 1st person plural is present the person specification of the other argument determines the appearance of the suffix (see Deal 2015): the presence of a 3rd person triggers Set B, whereas the absence of 3rd person results in Set A (Generalization #3).

Under the assumption that indirect objects are structurally higher than direct objects in Algonquian languages (see Branigan & MacKenzie 1999 for Innu-aimûn, Bruening 2001 for Passamaquoddy, and Hamilton 2015 for Mi'gmaq), only the subject and indirect object are probed on the first cycle in ditransitives. This is why 3rd person direct objects do not trigger Set B with 1st person plurals.

The link between cycles and suffixes is such that: (a) the ability for a second cycle of probing derives the ability of 3rd person direct objects to trigger Set B suffixes for 2nd person plural, and (b) the limiting of 1st person plural to only the first cycle restricts 3rd person direct objects from triggering Set B suffixes for these forms (Generalization #4).

Support that the structural height of arguments, rather than grammatical role, is important comes from ditransitive reflexives and passives. Since the subject and indirect object are in a way identical in both constructions (depending on the analysis, they are either copies of the same DP (e.g., Hornstein 1999) or members of the same chain (e.g., Reuland 2011), the direct object becomes available for probing on the first cycle, since it counts as the second separate argument. This allows a 3rd person direct object to trigger Set B suffixes in these 1st person plural forms (Generalization #5).

**Implications:** The apparent person hierarchies involved in the selection of this suffix, i.e.,  $1 \gg 2 \gg 3$ , is epiphenomenal. These effects can be derived syntactically via cyclic articulated probing, argument locality, and the presence/absence of certain persons, e.g., 3rd person DPs for Cheyenne. The presence of, and variation in, locality restrictions suggests that we need to account for the distribution of these suffixes in the narrow syntax.

**Selected references:** Béjar & Rezac, 2009. Cyclic agree. *Linguistic Inquiry*; Coon & Bale, 2014. The interaction of person and number in Mi'gmaq. *NordLyd*; Deal, 2015. Interaction and satisfaction in  $\phi$ -agreement. *NELS* 45; Leman, 2011. *A reference grammar of the Cheyenne language*; Preminger, 2014. *Agreement and its failures*.

## On plural features: reciprocal predication and bare singulars in Brazilian Portuguese

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**1. The puzzles.** Ferreira (2010) observed that in Brazilian Portuguese (1) is ambiguous, allowing both a reflexive and a reciprocal reading, whereas (2) blocks the reciprocal reading :

(1) Eu vi aluno se cumprimentando.

I saw student SE greeting ‘I saw students **greeting themselves/each other**’.

(2) Eu vi aluno que estava se cumprimentando.

I saw student that was SE greeting ‘I saw students who were **greeting themselves/\*each other**.’

Both examples are built with count bare noun phrases (CBNs, henceforth), which are morphologically unmarked, but semantically number neutral (Schmitt and Munn 1999), being able to be interpreted – depending on the context - as referring to either singular or plural individuals. [Ferreira (2010) shows that the contrast between gerunds and finite relative clauses wrt reciprocal readings is replicated wrt the group-internal readings of *mesmo* ‘same’ as well as wrt cumulative readings. In the talk, the solution proposed here for reciprocals will be shown to extend to the other data, which are not discussed here for lack of space.] The unavailability of the reciprocal reading in (2) might suggest that in examples of this kind, the CBNs cannot refer to a plurality, but this is disconfirmed by the fact that they can be naturally resumed by plural pronouns: a sentence of the type *Eles pareciam malucos* ‘They seemed crazy’ is a possible continuation of the reflexive version of (2). In this talk we will be only interested in plurality-referring CBNs. An account of the data in (1)-(2) requires a better understanding of (i) the role of plural morphology in allowing reciprocal readings and (ii) the difference between non finite and finite inflections.

**2. The assumptions.** The proposal will rely on non-directional Agreement and a constraint on reciprocal readings:

(3) *Non-directional Agreement*

a. Num(ber) features are born valued on both Ns (little n or Det) and Vs (Tense).

b. The features of the external argument and of the verb unify. (by unification, each of the members of an agreement relation is marked with its own features plus the features of the other member).

(4) Reciprocal predications are blocked if V-Tense carries a SG feature.

Arguments in favor of non-directional Agreement can be found in Barlow 1988, Kratzer 2009 and Ackema & Neelman 2013, a.o. Turning now to (4), it goes against the current view, according to which phi-features are interpreted only on DPs (hence, phi-features on V-Tense would need to be deleted before LF). The current view is motivated by the obvious fact that Number features give indications regarding the referents of DPs: plural marking signals plural referents. However, as already observed above, the interpretive contrast exhibited by (2) between reflexive and reciprocal readings cannot be attributed to the denotation of the external argument itself, which refers to a plurality in both cases. The difference between the two readings is a particular case of the difference between distributive and collective readings, which are known to be independent of the referential properties of arguments and instead depend on the denotation of the VP. Therefore, if any morphological marking related to the collective vs distributive distinction exists, it is expected to be interpreted on V-Tense. One may now wonder why a SG feature blocks the distributive (reflexive) rather than the collective (reciprocal) reading. The answer is that distributive readings are obtained by a default application of Link’s star operator to atomic/distributive predicates (see Krifka’s Lexical Cumulativity Hypothesis). Using the star notation for pluralization and the COLL(ective) subscript to indicate the collective reading, we may distinguish between reflexive and reciprocal readings of SE-verbs as in (5)a-b, both of which are saturated by plurality-referring DPs :

(5) a.  $\lambda X. *SE-greet(X)$

b.  $\lambda X. SE-greet_{COLL}(X)$

This short discussion does not constitute evidence in favor of (4), it merely provides some motivation for it: if the collective vs distributive reading is to be morphologically marked, it will be marked (i) on verbs, and more precisely (ii) on collectively interpreted verbs.

**3. Explaining the data.** The reciprocal reading of (1) can now be explained by assuming that gerunds are not marked as SG but rather they do not have any Number feature and therefore the constraint in (4) does not apply, hence the possibility of the reciprocal reading (in addition to the reflexive one). Compare the example in (2): *estava* is the exponent of *estar*<sub>3SGPast</sub>, which violates (4), hence the impossibility of the reciprocal reading. On the other hand, an example like *\*Eu vi aluno que estavam se cumprimentando*, where *estavam* is the exponent of *estar*<sub>3PLPast</sub> is ruled out by the agreement rules of BrP (see §4 below).

**4. Agreement mismatches.** Effects of the constraint in (4) can also be observed in English, e.g., *\*The mafia hates<sub>SG</sub> each other*, or in Basque, where the reciprocal reading of a sentence containing a subject of the form *much*-NP (interpreted as ‘many/a lot of NPs’) is blocked if the verb is SG marked (Etxeberria, U. & R. Etxepare (2012)). These languages nevertheless differ from BrP in that they allow agreement mismatches, i.e., the verb may be morphologically marked as PL despite the SG (or absence of) Number marking of the subject. The crosslinguistic difference can be captured by parametrizing the constraints on the agreement relation:

- (6) a. A PL-marked Number of V-Tense is legitimate only if the Number of the subject DP is also PL-marked (matching languages).  
 b. A PL-marked exponent of the Number of V-Tense can co-occur with a SG-marked exponent of the Number of the subject DP (mismatching languages).

Due to the PL-valuation of the Number feature of V-Tense, reciprocal readings are allowed in English and Basque despite the SG-valuation of the DP, e.g. *The mafia hate<sub>PL</sub> each other*.

**5. Collective DPs.** Ferreira (2010) observed that in the following examples, singular morphology does not rule out reciprocal predications :

- (7) {A criança/ Um grupo de mulheres/ A maioria das mulheres} se abraçou.  
 {the bunch-of-children/ a group of women/ the majority of women} SE hugged-3sg  
 ‘{The (bunch of) children/ Some (group of) women/ Most women} hugged each other’

This type of example can be explained by relaxing the constraint in (4) ((4)’: Reciprocal predications are blocked if V-Tense is marked [SG] and [AT(omic)]) and by assuming that (i) collective nouns carry a semantic COLL feature (see the Index feature of Kathol (1999) and Wechsler and Zlatic (2003) or Sauerland’s (2004) Phi-Head), in addition to their morphosyntactic feature (see Wechsler and Zlatic’s Concord features) valued as SG and (ii) due to unification, the COLL feature of the DP is shared with V-Tense. [Note : *\*The mafia helps each other* is unacceptable because *mafia* denotes a set of ‘impure atoms’ (Winter 2002) rather than a set of collections/plural entities]. The account sketched here for collective Ns will be shown to extend to kind-referring CBNs : such nominals denote intensional maximal pluralities (obtained by applying Chierchia’s Down operator, an intensional maximality operator, to a pluralized singular noun), and as such they carry a COLL feature, thus making reciprocal predications possible.

**Selected References.** Etxeberria & Etxepare 2012. ‘When quantifiers do not agree : Three systems’. *Journal of Portuguese Linguistics*; Ferreira 2010. The Morpho-Semantics of Number in Brazilian Portuguese Bare Singulars, *Journal of Portuguese Linguistics* ; Kathol 1999. Agreement and the syntax-morphology interface in HPSG’, In Levine & Green (eds); Kratzer 2009. Making a pronoun. *LI* 40(2). Sauerland 2004 A Comprehensive Semantics for Agreement; Schmitt & Munn 1999. Against the Nominal Mapping Parameter: Bare nouns in Brazilian Portuguese. *NELS* 29; Wechsler & Zlatic 2003. The Many Faces of Agreement. *CSLI*. Winter 2002. Atoms and sets: A characterization of semantic number. *Linguistic Inquiry* 33.3 (2002): 493-505

## Two ways to be syntactically ergative: on avoiding defective intervention

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Many unrelated ergative languages exhibit a restriction on extraction of transitive ergative subjects, a phenomenon known as syntactic ergativity (SE) (Aldridge 2004, 2008, Coon et al. 2015, Deal 2015, Polinsky 2015).

- (1) \*Achike x-Ø-u-löq' ri äk'? (Kaqchikel)  
 who CPL-ABS.3S-ERG.3S-buy the chicken (int: 'Who bought the chicken?')

We focus on SE in Mayan languages, which we argue has two different sources, both stemming from the avoidance of defective intervention. In high absolutive (ABS) Mayan languages (all of which display SE, Coon et al. 2015), the internal argument gets ABS Case from T, but the external (inherently ergative) subject intervenes (2). There are two ways to circumvent this problem (see also Preminger 2010 on dative intervention) (3).

- (2) T<sub>[uPHI]</sub> ... DP<sub>[ERG]</sub> ... DP<sub>[UCase]</sub>  
 (3) a. Option 1: Move the transitive subject (altruistic movement)  
       DP<sub>i[ERG]</sub> T<sub>[ABS]</sub> ... t<sub>i</sub> ... DP<sub>[ABS]</sub>  
 b. Option 2: Move the transitive object (leapfrogging – Bobaljik 1995)  
       T<sub>[ABS]</sub> ... DP<sub>i[ABS]</sub> DP<sub>[ERG]</sub> ... t<sub>i</sub>

In (3a), the transitive subject moves 'altruistically' to SpecTP and ceases to intervene (see Holmberg & Hróarsdóttir 2003; Anand & Nevins 2006; Imanishi 2014; *i.a.*) resulting in SO order. In (3b), the object leapfrogs the subject to an outer specifier of the same head (v) making it closer (or at least equidistant) to T (see Bobaljik 1995; Aldridge 2004, 2008; Coon et al. 2015) resulting in OS order.

For type (3b) languages, we adopt a version of the analysis in Coon et al. (2015) and especially Aldridge (2004, 2008) whereby (i) the ergative subject originates in SpecvP, and (ii) there is a single escape hatch, so that 'leapfrogging' movement of the object to an outer SpecvP traps the subject inside the vP phase. In languages using option (3a), we argue that SE results from anti-locality (Erlewine 2015), but note that ERG is an inherent case on our proposal, not a structural case assigned by T (cf. *ibid.*), so many of Henderson & Coon's (2015) objections to an anti-locality analysis are avoided. We nonetheless adopt:

- (4) **Spec-to-Spec Anti-locality:** A-bar movement of a phrase from the Specifier of XP must cross a maximal projection other than XP (Erlewine 2015).

This only applies to transitive contexts in Mayan since altruistic movement of DP<sub>ERG</sub> to SpecTP only takes place to avoid defective intervention. In accusative languages where transitive and intransitive subjects are in SpecTP, anti-locality results in subject *that*-trace effects (Erlewine 2014; Douglas 2015). Both (3a) and (3b) are attested in Mayan languages.

The main evidence we consider concerns basic word order. Mayan languages split into three distinct word order classes (though classification is often difficult and/or controversial): (i) VOS, (ii) VSO and (iii) alternating VOS/VSO (Norman & Campbell 1978; England 1991). Types (i)-(ii) also typically permit SVO. We show that, if SE is present, type (i) languages tend to display across-the-board (ATB) SE, i.e. Agent Focus (or antipassive) is required whenever a transitive ERG subject undergoes any A'-extraction, whereas types (ii) and (iii) can display *partial* SE, i.e. some A'-extractions of the transitive ERG subject require Agent Focus, whilst others do not. Based on Stiebels (2006), Coon et al. (2015) and other descriptions, partial SE appears to follow an implicational hierarchy (if SE is exhibited for a particular A-bar construction, it is exhibited for all constructions to the right/lower on (5):

- (5) **Implicational hierarchy for Agent Focus (AF):** relative clause > question > focus

We argue that (5) derives from anti-locality combined with a universal functional sequence (see also Rizzi 1997: 289, 290-1, 300). Formally, we propose that the features triggering these

different A-bar movements are distinct and can be distributed according to the functional sequence across Force/Fin (as Rizzi shows) or collapsed onto one head, as schematised in (6):

- (6) a. Awakatek (ii), Akatek (iii):  $[_{ForceP} Force_{[REL/WH]} [_{FinP} Fin_{[FOC]} [_{TP} DP_{ERG} T \dots]]]$   
 b. Popti', Mam (ii), Kaqchikel (iii):  $[_{ForceP} Force_{[REL]} [_{FinP} Fin_{[WH/FOC]} [_{TP} DP_{ERG} T \dots]]]$   
 c. Q'anjob'al (ii), K'iche' (iii):  $[_{ForceP} Force [_{FinP} Fin_{[REL/WH/FOC]} [_{TP} DP_{ERG} T \dots]]]$

According to (4), movement from SpecTP to SpecFinP is anti-local. Consequently, in (6a) languages, only Focus movement exhibits SE since relative/question movement targets the higher head ForceP; in (6b) both wh- and focus (but not relative) movement exhibit SE; and in (6c) all kinds of A-bar movement exhibit SE, i.e. they require AF. Following Coon et al. (2014), we assume that AF serves to license the object in situ so that it does not depend on T for Case. As such, neither altruistic nor leapfrogging movement is required where AF is present, hence SE fails to occur. The clear prediction is that partial SE will only be possible in type (3a) languages, so that partial SE Mayan languages will be strict VSO or VSO/VOS, i.e. they must have SO orders. This prediction is borne out: all of the languages in (6) allow VSO.

In Leapfrogging (3b) analyses, on the other hand, SE is predicted to hold ATB because all intermediate A-bar extraction must proceed via spec vP. This prediction seems to hold: all strict VOS SE languages we are familiar with exhibit ATB rather than partial SE (based on data from Dayley, 1985; England, 1991; Durbin & Ojeda, 1978, Hofling, 1984; Norcliffe 2009; Pinkerton, 1976; Stiebels 2006):

- (7) Q'eqchi', Tz'utujil (San Juan, Santiago), Yucatec, Ixil (Cotzal) (i): (3b) = ATB SE, VOS

In both VOS and VSO languages, we propose that verb movement to a higher position (T or Fin) derives V-initial order.

There are, of course, many Mayan languages that do not exhibit SE. Following Coon et al (2014) we assume that in these languages the object is Case-licensed by v rather than T (see also Aldridge 2004, 2008, Legate 2008). As such, there is no defective intervention and no motivation for altruistic or leapfrogging movement. As Coon et al show, this is also reflected in the position of absolutive markers in these low ABS languages. In such cases, VSO order results from V-movement past a vP-internal subject and VOS order is derived by predicate fronting (see Coon 2010). There are thus multiple ways to derive verb-initial orders.

In addition to accounting for differences in basic word order, our account also makes further predictions regarding the attestation of AF in type (3a) vs. (3b) languages. (i) Altruistic (3a) languages may display different SE patterns in local vs. non-local movement, as is the case with that-trace effects (see Douglas 2015). (ii) Only in type (3a) languages will SE be sensitive to the insertion of adverbials between TP and FinP (see Erlewine 2015). (iii) In type (3a) languages, SE will only restrict the extraction of *transitive subjects* - all other arguments/adjuncts should be extractable, whereas in type (3b) languages it is possible that *only* absolutive objects can be extracted. Initial findings partially support these predictions, though research is ongoing and challenges remain. In Popti' (a (3a) language), AF is obligatory in instances of local extraction, but only optional in non-local extraction. This is consistent with the idea that successive cyclic movement can proceed through a different position compared with local extraction. Evidence presented by Erlewine on Kaqchikel (a (3a) language) suggests that adverbs mitigate anti-locality, avoiding the need for AF (but see also Henderson & Coon 2015 for a critique of the data). Finally, note that while Kaqchikel also allows A-bar extraction of oblique arguments with no special morphology adjustment (indirect object, locative and instrumental) (Assmann et al. 2012), in many Mayan languages instrumental voice is required to extract instruments. Interestingly, though, this does not correlate with the S>O, O>S distinction. Popti', for example is VSO and displays partial SE and yet requires AF for the extraction of instruments (Craig 1977). K'iche' and Tz'utujil are VSO/VOS and display ATB SE but require instrumental voice to extract instruments.

## What subextraction from depictives can tell us about lexical aspect in first phase syntax

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**THE PROBLEM AND ITS RELEVANCE.** Inside a radical constructionist model like Nanosyntax (Ramchand 2008), one prediction is that what seems to be an atomic lexical form is in fact a complex syntactic constituent: what has been traditionally analysed as a lexical unit stored in the lexicon is a matrix of features distributed in a series of heads that have been put together by syntax and form a constituent (see discussion in Bosque 2012). In this paper we provide evidence for this general view –and, specifically, for its application to the study of Aktionsart– through cases that, on the surface, look like subextraction from inside certain types of adjuncts in English and Spanish. It is generally assumed that adjuncts are islands with respect to extraction (Condition on Extraction Domains –CED–, as in Huang 1982, Stepanov 2007, Chomsky 2008). Counterexamples involve Depictive Adjectival Secondary Predicates (DASPs):

- (1) a. What did John come back [addicted to ~~what~~]?  
b. John came back [addicted to chocolate]. Borgonovo & Neeleman (2000)
- (2) ¿En cuántas partes encontraste [roto ~~en cuántas partes~~] el libro?  
‘In how many parts did you find broken the book?’ Demonte (1988: her ex. 61b)

We will show that these examples are properly analysed as situations where the same set of syntactic heads that is normally lexicalised as one single verb is spelled out with two or more verbal exponents

### RESTRICTIONS ON SUBEXTRACTION FROM DASPs AND PREVIOUS ANALYSES.

A. DASPs must be adjacent to the main verb.

- (3) a. \*¿Con quién volvió María [enfadada ~~con quién~~]?  
b. ¿Con quién volvió [enfadada ~~con quién~~] María  
‘Whom did Mary return angry with?’

B. DASPs must be oriented to an internal argument –never to an external one–. Thus they are compatible with unaccusatives but not with unergatives:

- (4) a. ¿Con quién llegó [enfadada ~~con quién~~] María? *DASP with Achievements*  
‘Who did Mary arrive angry with?’  
b. \*¿Con quién contestó [enfadada ~~con quién~~] María?  
‘Who did Mary answer angry with?’

C. Only achievement verbs (4a) license the subextraction.

- (5) a. \*¿Con quién contestó enfadada María?  
‘Who did Mary answer angry with?’  
b. María contestó enfadada con su profesor. *DASP with Accomplish.*  
‘Mary answered angry with her teacher.’
- (6) a. \*¿De quién buscó harta Juan a María?  
‘What did John look for Mart fed up with?’  
b. \*Juan buscó a María harta de tantas dietas. *DASP with Activities*  
‘John looked for Mary fed up with so many diets.’

- (7) a. \*¿De quién esperaba harta María?  
       ‘Who was Mary waiting fed up with?’  
       b. María esperaba harta de su hermano.  
       ‘Mary was waiting fed up with his brother.’

*DASP with States*

The grammaticality judgements have been obtained through an experiment with 161 informants.

**(SYNTACTIC) ANALYSIS.** We adopt Ramchand’s (2008) constructionist approach, where the maximal size of an event in the syntax is [InitP [ProcP [PathP [ResP]]]]. Assuming that every lexical verb consists of a subset of these heads, we argue that apparent adjuncts allowing subextraction project as Paths inside the event structure, as in (8). The path structure is lexicalised by the DASP and the main predicate lexicalises the other projections, but both items (V and DASP) integrate in the same syntactic space. In fact, we suggest that a ‘complex predicate’ is nothing but the situation that emerges when more than one lexical exponent spells out the syntactic space where Aktionsart and argument structure are defined.

- (8) [InitP <llegar> [ProcP <llegar> [PathP <enfadada>[ResP <ø>]]]]

In set-format (9), at the point where the PathP is projected, we typically have a merge operation involving two complex sets (9a, 9b). The Path set projects its label to the resulting set (9c). Note that (as seen in 9c) the DASP is not an adjunct; adjuncts never change the label of the set they merge with.

- (9) a. {Path, {{Path}, {Proc, {{Proc}, {wh}}}}} (DASP)  
       b. {Res, {{Res}, {P}}} (part of the main predicate built at that point)  
       c. {Path, {{Path, {{Path}, {Proc, {{Proc}, {wh}}}}}, {Res, {{Res}, {P}}}}}

Subextraction from DASPs is possible only if the main verb is an achievement. This is accounted for in our proposal as follows: in order to integrate with DASPs in the same syntactic space, the main verb must not spell out PathP, because DASPs are merged as projections of Path. Achievements –*arrive*–, being instantaneous changes of state, leave PathP unprojected. However, accomplishments –*eat*– and activities –*run*– project PathP, because they contain a measure of change across time, and as such they do not leave space for BPPs and ASPs to integrate with them. States –*know*–, not containing ProcP, cannot license Path syntactically, so DASPs are impossible in general with them.

Consider now the restriction on the internal argument. In order to modify an external argument –which is merged in InitP, the highest projection in the verbal domain–, minimality should be violated: (10) shows that given usual assumptions about minimality, Init and Proc can have the same argument, Proc and Path too, but not Init and Path.

- (10) a. [X Init [X Proc [Y Path ...]]]  
       b. [X Init [Y Proc [Y Path ...]]]  
       c. \*[Y Init [X Proc [Y Path...]]]

The preference for adjacency between the main predicate and the DASP trivially follows if they share the same restricted syntactic space.

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### Jespersen's Cycle and scope of negation in American Sign Language

**Introduction.** Under contemporary logicians' conception, negation is generally thought to be purely external, and none of the current theories of negation straightforwardly accommodates the distinction between external (i.e. sentential) and internal (constituent) negation (Gazdar 1979, Levinson 1983, Horn 1989, a.o.). In American Sign Language (ASL), it is known that facial expressions and head movements serve grammatical functions, with the negative headshake capable of signifying external negation in combination with an optional manual negative marker (negative adverb) (Zeshan 2004, Veinberg & Wilbur 1990). Yet previous research on the syntax and semantics of negation in ASL has overlooked the possibility of internal negation as separate from external negation. Fischer (2006) mentions the possibility that internal negation exists in ASL in her discussion of negative incorporation, but an in-depth analysis has not been undertaken for internal negation the way that it has for external negation.

**Proposal.** Recent research (Pfau 2015) suggests that, just as negation in French has evolved, this pattern of negation in ASL has arisen as the result of Jespersen's Cycle where the negative headshake (*hs*) replaces the original head of NegP, manual negation (NEG<sub>adv</sub>). The goal of the present paper, however, is the following: First, our data confirm that the headshake has strengthened, i.e. reanalyzed and grammaticalized as the main marker of external negation indeed (while the accompanying manual negation has become only optional) (Figure 1). Second, more importantly, we show that the job of the manual negation marker was not merely weakened or nullified in this process, contrary to the general assumption in the literature. Instead, the manual negation, standing alone, has become a marker of *internal negation* (Figure 2).

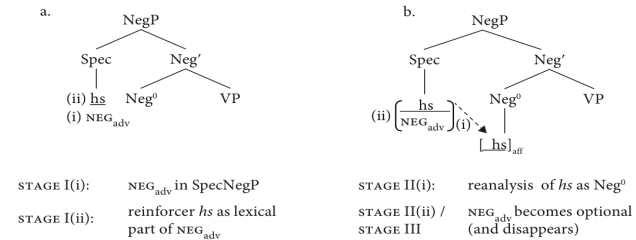


Figure 1: Jespersen's Cycle in sign languages (Pfau 2015)

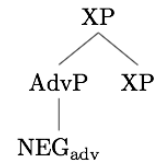


Figure 2: Internal negation in ASL  
 (current proposal)

**(i) New dichotomy: external vs. internal negation in ASL.** We show that ASL exhibits two subtle yet distinct patterns of negation: External negation in (1) requires the presence of a non-manual marker in the form of a negative headshake, indicated in the gloss by a line marking the scope and duration of the headshake (neg). Internal negation with manual negation (**NOT**) in (2) requires no such marker. This means the manual negation undergoes a vehicle change w.r.t. both syntactic category (from 'Neg<sup>0</sup>-potential in NegP' to 'negative Adv (without projecting NegP)') and semantic type (from propositional operator of <t,t> to predicate modifier of <<e,t>,<e,t>>).

- |   |  |
|---|--|
| <p style="text-align: center;"><u>neg</u></p> <p>(1) MOTHER FUTURE (<b>NOT</b>) BUY HOUSE<br/>       [ASL]<br/>       'Mother will not buy a house'</p> <p>(2) JOHN SORRY <b>NOT</b> READ BOOK<br/>       'John regrets not having read the book'</p> | <p>(External Negation)</p><br><br><br><br><br><br><br><p>(Internal Negation)</p> |
|---|--|

### 1. Tag questions: internal negation exclusively allows for negative tag-questions

- ## II. Again-test: external negation gives rise to both restitutive and repetitive readings

- ### III. Deliberately-test: external negation gives rise to ambiguity

- #### IV. Metalinguistic Negation: not available to internal negation

- ### V. Expletive Negation: not available to internal negation

- ### VI. Try-to-V Constructions: narrow scope is available to internal negation

- Implications.** In exploring negation in ASL, we show that there exist asymmetries between two negative markers. We suggest that manual negation has been ‘reanalyzed’ (à la Hopper & Traugott 1993) as an internal negation. Our analysis implies that negation in ASL patterns with other paths of meaning change involving two levels of semantic ‘restructuring’ (Eckardt 2006) in the semantic composition: (i) manual negation undergoes a shift akin to Jespersen’s Cycle, losing its Neg<sup>0</sup> status; and (ii) it is reanalyzed as negative Adverb with a concomitant shift in meaning (propositional operator > predicate modifier). Such processes of semantic restructuring are the subject of great interest in the recent semantics literature (see Deo 2015), and can yield insights into the relation between diachronic change and synchronic meaning.

## Scope in negative inversion constructions: Evidence from positive polarity item modals

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This paper presents and explores a scope puzzle in English Negative Inversion (NI) constructions. NI (e.g. *Under no circumstances will I sing*) involves  $I^0$ -to- $C^0$ /Foc<sup>0</sup> movement of an auxiliary and preposing of a negative expression, which could be one of a variety of (Strawson) downward-entailing (DE) expressions (Haegeman 1995, 2000, Rizzi 1996, Büring 2004, Collins & Postal 2014, a.o.). It has been argued that the preposed expression must take widest scope in a NI clause (Collins & Postal 2014). This is claimed to be necessary to account for the lack of inversion in (1a), where NEG scopes only over the preposed topic, in contrast to (1b), where it scopes over the whole clause (Büring 2004, Collins & Postal 2014)

(1) a. With no job, Kim would be happy.

b. With no job would Kim be happy.

(Büring 2004: 6)

I present new data showing that this claim must be revised. Certain modals, such as deontic *should* and *must*, obligatorily take scope over sentential negation in uninverted sentences (Cormack & Smith 2002, Butler 2003, von Stechow & Iatridou 2007) and have been argued to be positive polarity items (PPIs) (Homer 2010; Iatridou & Zeijlstra 2013). If the preposed negative expression takes widest scope, we should therefore predict that these modals cannot appear in NI sentences. However, as (2-3) demonstrate, this is not the case. *Should* is a strong PPI that is not licensed in the scope of DE operators (e.g. *fewer than three* in (2)), while *must* is a weaker PPI; it is licensed in the scope of (Strawson) DE operators (e.g. *only* in (4)) as long as they are not antiadditive (AA) (e.g. *no* in (3)). Sentences (2-3) are unsurprisingly ungrammatical on the (b) readings, where the PPI modal takes scope under an antilicenser; what is surprising is that the grammatical wide scope reading for the modal (a) is available for both sentences.

(2) On fewer than three days this week should you water your lawn.

a. SHOULD<sub>DEO</sub> > FEWER THAN THREE

b. \*FEWER THAN THREE > SHOULD<sub>DEO</sub>

(3) To no student must you give the answers to the exam questions.

a. MUST<sub>DEO</sub> > NEG

b. \*NEG > MUST<sub>DEO</sub>

When the preposed expression is not an antilicenser for the PPI, both readings are available.

(4) Only then must you leave.

a. MUST<sub>DEO</sub> > ONLY

b. ONLY > MUST<sub>DEO</sub>

Two explanations for the facts in (2-4) are possible: either the preposed negative expression reconstructs to be interpreted below the PPI modal at LF, or else the modal takes exceptional wide scope above the preposed expression in SpecCP/FocP. The first option is ruled out by the data in (5-7). These sentences show that, while the preposed expression does reconstruct for Binding Condition C (5), it does not reconstruct for scope (6-7). These conflicting reconstruction facts are interesting in their own right and will be discussed in greater detail.

(5) To no fan of Adele<sub>i</sub> did she<sub>\*i/j</sub> give an autograph.

(6) Never have more than four students passed this exam.

a. \*MORE THAN FOUR > NEVER

b. NEVER > MORE THAN FOUR

(7) To no student does John always give an A.

a. \*ALWAYS > NEG

b. NEG > ALWAYS

The second option has precedent in the literature. Iatridou & Zeijlstra (2013) argue that PPI modals can undergo quantifier raising (QR) to escape the scope of a negative expression. They propose that all modals are generated below sentential negation and obligatorily reconstruct to this position unless the modal is a PPI; PPI modals that appear above NEG in the surface structure are interpreted in their surface position, while PPI modals that appear below NEG QR to escape its scope. If the modals in (2-4) achieve wide scope by QR, we can capture both their grammaticality and the facts in (5-7). In uninverted sentences, PPI modals do not have to QR very far to escape an antilicenser; in NI sentences they must QR a little higher, to a position above SpecCP/FocP. This is perfectly compatible with the preposed expression taking widest scope within its clause, as Collins & Postal (2014) claimed; the modal simply QRs to a position outside the clause.

However, this approach faces two problems. Firstly, it must explain why quantificational DPs, such as *more than four students* in (4), are unable to QR above the preposed negative expression in NI sentences as modals do. I argue that this can be attributed to independent differences between *more than four students* (a non-PPI phrase) and *must* (a PPI head). This account also predicts that other PPI modals will behave like deontic PPI modals in NI contexts; epistemic *must*, which is a PPI (Iatridou & Zeijlstra 2013), should be just as grammatical on a wide-scope reading with a preposed AA operator as its deontic counterpart is in (3), and just as grammatical on both readings with a preposed DE operator as deontic *must* is in (4). This prediction is not borne out. There are two patterns of responses to epistemic PPI modals in NI sentences, and neither is identical to the deontic pattern. Group A speakers accept epistemic PPI modals in a subset of the NI contexts where they accept deontic PPI modals; they accept epistemics on a wide scope reading but not on a narrow scope reading, regardless of whether the preposed expression is an antilicenser for that PPI (8) or not (9). Group B speakers reject epistemic PPI modals in all NI sentences regardless of the intended scope.

(8) To no student must Laura have given an A.

- |                 |                       |                       |
|-----------------|-----------------------|-----------------------|
| <b>Group A:</b> | a. $MUST_{EPI} > NO$  | b. $*NO > MUST_{EPI}$ |
| <b>Group B:</b> | a. $*MUST_{EPI} > NO$ | b. $*NO > MUST_{EPI}$ |

(9) To few students must Laura have given an F.

- |                 |                        |                        |
|-----------------|------------------------|------------------------|
| <b>Group A:</b> | a. $MUST_{EPI} > FEW$  | b. $*FEW > MUST_{EPI}$ |
| <b>Group B:</b> | a. $*MUST_{EPI} > FEW$ | b. $*FEW > MUST_{EPI}$ |

I argue that for Group A the (b) readings are ruled out by the Epistemic Containment Principle (ECP) (von Stechow & Iatridou 2003), which bans moved quantifier phrases from binding their traces across epistemic modals at LF; thus, the contrast in their responses for deontic and epistemic PPI modals reduces to an independently motivated property of epistemic modals.

All that is left to explain is the behaviour of the Group B speakers. I explore several initially appealing lines of investigation and show that none of them can capture all of the data. For example, the data in (8-9) cannot be due to a general ban on epistemic modals undergoing subject-auxiliary inversion, because they readily do so in questions:

- (10) a. Where might he have gone?  
b. Must she have seen the accident?

Similarly, (8-9) cannot be due to a need for epistemic modals to be interpreted higher than deontics (Cinque 1999, Hacquard 2006, a.o.). If this were the relevant asymmetry, we would expect the opposite pattern; the need for epistemics to scope high should give them all the more reason to take wide scope in NI sentences. Alternatively, one might imagine that epistemic modals are incompatible with the information structure effect of NI. It has been suggested that NI involves verum focus (Leonetti & Escandell-Vidal 2009), which has been argued to yield epistemic implicatures. However, epistemic modals coexist with verum focus in (11).

- (11) a. Mustn't there be some kind of emergency off switch?  
b. The butler MUST be guilty!

A fourth possibility is that Group B speakers have a different version of the ECP. Perhaps, for these speakers, the ECP constrains not only representations but also derivations (see Preminger 2014); Group B's ECP' would include a ban on movement that creates a  $*QP_i \dots modal_{EPI} \dots t_i$  configuration unless failure to move would lead to ungrammaticality (as in uninverted sentences like *Everyone must<sub>EPI</sub> have  $t_i$  passed the exam*, where *everyone* has to move over the modal to get to SpecIP; this creates an ECP' violation that is resolved by having the modal take scope above the QP at LF); this would rule out NI with epistemic modals for these speakers. This, I argue, captures the contrast between epistemic and deontic PPI modals for these speakers as well as the data in (5-7) and (10-11). In this way, the intricate NI scope data discussed in this paper shows that we must revise what has been said about both the scopal properties of the NI construction itself and the scope-taking behaviour of epistemic modals.

## Imperatives and their left periphery

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**1. Introduction and goal.** A number of recent works have examined the internal composition and extent of the phrasal hierarchies in the left periphery of different clause types, mainly concentrating on the distinction between root, ‘root-like’ subordinates and (diverse) embedded clauses (cf., among others, Haegeman 2002; Heycock 2006). Some works have also focused on the projection of discourse categories, leading to a clause-related distinction for (different types of) Foci, Contrast and Topics, also based on semantic and prosodic interface considerations (cf. Âmbar 1999, Haegeman 2004, 2012; Bianchi & Frascarelli 2010; Bianchi 2012). The data examined generally concern declarative or interrogative clauses, while no such study was ever proposed for imperative clauses.

This paper intends to provide a contribution in this direction, confident that such a ‘multifactorial investigation’ can shed new light on the syntax-semantic properties of imperative clauses from a cartographic perspective and improve our understanding on discourse-related categories and their role in conversational dynamics (specifically, the connection between different types of Topics/Foci and illocutionary Force; cf. Krifka 2007, Bianchi & Frascarelli 2010).

**2. Describing the picture: The association of Topics and Foci with imperatives.** Assuming Frascarelli & Hinterhölzl’s (2007) interface distinction between Aboutness-Shift (A-)Topics, Contrastive (C-)Topics and Familiar/Given (G-)Topics, it appears that the semantic and discourse properties of A-Topics can hardly associate with the imperative mood, as shown by examples (1a-b) from Italian, where (1b) involves an AS-Topic in the left periphery:

- (1) a. *Basta giocare: vai subito a finire i compiti!*  
‘Stop playing: go and finish your homework immediately!’  
b. *\*Basta giocare: i compiti, vai subito a finirli!*  
‘\*Stop playing: your homework, go and finish it immediately!’

If we follow Kempchinsky’s suggestion (2009) that imperatives have a semantic operator in Finiteness, which is interpreted as ‘anyone else except the speaker’, their incompatibility with A-Topics can be explained by the fact that this operator must take scope over the proposition. As argued in Bianchi & Frascarelli (2010), an A-Topic constitutes a speech act on its own (an ‘initiating speech act’, cf. Krifka 2001), introduced by a dedicated speech act operator and (possibly) conjoined to the speech act expressed by the following sentence. Hence, though they might *in principle* be associated with an imperative, a sentence like (1b) cannot be interpreted because two instructions cannot be successfully managed in the same complex speech act. On the other hand, C-Topics (2B) and G-Topics (3) seem to be allowed (both in Italian and Spanish), showing that they can be interpreted in the scope of operators:

- (2) A. *Dove posso mettere questi fiori?* (‘Where can I put these flowers?’)  
B. a. *Le rose, mettile nel vaso, il girasole lascialo sul tavolo.*  
b. *Las rosas ponlas en el jarrón, el girasol déjalo sobre la mesa.*  
(lit. the roses put-them in the vase, the sunflower leave-it on the table)  
(3) a. *La palla tirala./ Tírala, la palla.*  
b. *La pelota tírala./ Tírala, la pelota.* (lit. the ball throw-it/throw-it the ball)

In this respect, English appears to provide some cross-linguistic differences. Cormany (2013) argues that non-contrastive topics are not allowed in English and, in general, left-peripheral arguments are often unacceptable (from Jensen 2007):

- (4) a. \*Your essay, leave in my pigeon hole this afternoon.      b. \*The weapons leave behind.

However, this is not absolute. Sentences (5a–c), from Haegeman (2012:120), obtain acceptable results, and the context clearly induces a C-Topic interpretation for the fronted constituents. Thus C-Topics (though not G-Topics) are fronted in imperatives:

- (5) a. The tie give to Bob, the aftershave give to Don.  
b. Anything you don't eat put back in the fridge.

This is expected given Bianchi & Frascarelli's suggestion that in English G-Topics are realized through destressing.

As for foci, a Mirative Focus (MF) totally 'clashes' with the imperative mood (compare declarative (6a) with (6b) from Italian), while Contrastive Focus (CF) is unproblematic as long as the focused element remains in situ, as in (7). The crucial observation is that MF is argued to be connected with a root 'evaluative' force (a "proposal to negotiate a shared evaluation", cf. Bianchi 2012), while Correction can be associated with any kind of clause.

- (6) a. Wow! DUE BOTTIGLIE abbiamo bevuto! (Wow: TWO BOTTLES OF WINE we drank!)  
b. \*Wow! DUE BOTTIGLIE bevi immediatamente! (Wow: TWO BOTTLES drink now!)  
(7) Bevi L'ACQUA, non il vino! / ¡Bébetel EL AGUA, no el vino! (Drink WATER, not wine!)

**Generalization:** The realization of discourse-related categories seems to suggest a non-root analysis for imperative clauses, despite their apparent matrix character.

**3. The proposal.** Cormany (2013) proposes that in imperatives V raises to Fin and the 'subject' to spec-FinP. Jensen (2007), on the other hand, concludes that imperatives lack a CP domain altogether. We think that the data examined lead toward a different solution.

Based on the results provided by an interface investigation of elicited data and original interpretive questionnaires, this paper will show that imperative is a *mood* (not an independent illocutionary force) and, as such, it is encoded in a dedicated functional projection in the split-IP area. Furthermore, it is argued that the imperative mood is dependent on a 'hidden' illocutionary force that is activated in a matrix 'silent clause', including featural information about speaker and hearer (thus implementing works by Speas & Tenny 2003, Haegeman & Hill 2010 and Miyagawa 2012, a.o.). Specifically, the imperative mood is activated via an Agree relation with Fin<sup>o</sup>, where an imperative operator is located. In other words, resuming Ross' (1970) original 'performative hypothesis', it is proposed that imperatives are *subordinate clauses*, thus accounting for their reduced left periphery and that consequent unavailability of root-connected discourse categories that implement a conversational move.

The inactivation of an independent Force can explain why imperatives block the realization of A-Topics and MF, still allowing for C-Topics, G-Topics and CF. Intonational evidence is provided, examining the different discourse-related categories associated with true and 'disguised' imperatives, in a comparative approach across the three languages examined.

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## Eccentric agreement can be monstrous

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Béjar and Rezac (2009) develop an elegant proposal which accounts for the syntax of so-called agreement displacement sensitive to person hierarchies, i.e. patterns of agreement where either the subject or the object may control agreement in the same morphological position depending on their relative specification for person and grammatical function (also called eccentric agreement, context-sensitive agreement, and dependent agreement). E.g. in Basque the controller for person agreement alternates between the internal argument (IA) and the external argument (EA) depending on their relative  $\phi$ -feature specification. In brief, the essence of their Cyclic Agree mechanism boils down to the following ingredients: (i) The  $\pi$ -probe is placed between the EA and the IA on  $v^\circ$ , (ii) The  $\pi$ -probe in a given language is sensitive to a particular specification of the goal in terms of [person], [participant], and [speaker], and (iii) The agreement displacement pattern follows from a bottom-up derivation whereby the EA is added later than the IA, so that the  $\pi$ -probe attempts to agree with the IA in the first place and can agree with the EA only if the agreement with the IA failed.

In this paper, I first provide evidence from the Nakh-Daghestanian language Dargwa that the Cyclic Agree approach cannot account for the choice of  $\pi$ -features on the verb. Unlike most other Nakh-Daghestanian languages, Dargwa obligatorily shows person agreement of the finite verb with one of its arguments, either absolutive or ergative. Virtually all Dargwa lects display eccentric agreement and fall into three basic types (Sumbatova 2011): (a) lects with purely hierarchical person agreement based on the hierarchy  $2 > 1 > 3$ , as in Itsari and some other varieties from the southern periphery of the Dargwa-speaking area, (b) lects with the hierarchy  $1, 2 > 3$  and the preference for the IA when both arguments are speech act participants, as in Standard Dargwa and other varieties from the northern dialect cluster, (c) lects with the hierarchy  $1, 2 > 3$  and the preference for the EA when both arguments are speech act participants, only attested in Chirag.

On a first view, the data cannot present a challenge to the CA theory. Indeed, the approach is specifically designed to account for the existence of types (a) and (b), whereas type (c) can be derived by locating unvalued  $\pi$ -features on a probing head above the EA, e.g.  $T^\circ$ . The problem, however, comes from the fact that person agreement in Dargwa is also “monstrous” (Sundaesan 2011), which means that in reported speech constructions argument’s  $\pi$ -features reflected on the finite verb may be interpreted not in the context of the actual speech act, but from the point of view of the reported speech act. In particular, in Dargwa person agreement may only be interpreted in the context of the reported speech act, unlike personal pronouns which allow both unshifted and shifted interpretations.

(1) *rasul-li<sub>k</sub> b-ur-ib, nu<sub>CS</sub> moskwa.li-zi la<sup>s</sup><w>q’-a<sup>s</sup>n ili.*

Rasul-ERG N-tell:PF-PST I(ABS) Moscow-LOC <M>come:IPF-FUT:3 COMP

‘Rasul<sub>k</sub> said that I<sub>CS</sub> would come to Moscow.’

(2) *rasul-li<sub>k</sub> {nu<sub>k</sub> / sa-j<sub>k</sub>} mosk:wa.li-zi arq’-asi-ra ili b-ur-ib.*

Rasul-ERG I(ABS) self-M(ABS) Moscow-LOC go:IPF-FUT-1 COMP N-tell:PF-PST

‘Rasul<sub>k</sub> said that he<sub>k</sub> would go to Moscow.’

In (1), the first person pronoun *nu* ‘I’ referring to the speaker of the actual speech act (Current Speaker, CS) does not trigger first person agreement on the embedded finite verb. In contrast, as (2) demonstrates, the argument denoting the original speaker of the reported speech act triggers first person agreement on the verb, irrespective of whether it is expressed by the normal first person pronoun *nu* ‘I’ or the reflexive-logophoric pronoun *sabi*.

Syntactically, the original speaker's point of view in reported speech is usually derived by introducing a null S(peaker), or logophoric agent, argument at the left periphery of the speech complement (e.g. Sigurðsson 2004, Baker 2008). Arguments in the embedded clause enter into an Agree relation with the left peripheral S argument and thus receive their  $\pi$ -specification. This means that if we assume a model of monstrous agreement that relies on the presence of the null S argument in the C layer of the embedded clause, then a scenario à la Béjar and Rezac (2009) is impossible for eccentric agreement, since at the moment when  $v^\circ$  is supposed to probe the object and the subject, none of the latter has been assigned  $\pi$ -features. The second goal of this paper is to propose a theoretical solution to the problem of person agreement that is sensitive both to logophoric operators in CP and to relative  $\pi$ -specification of the EA and IA. In a nutshell, I propose that eccentric agreement in Dargwa belongs to the family of Person-Case Constraint effects and maintain that the problem may be dealt with using the Multiple Agree mechanism proposed by Nevins (2007, 2011). The derivation proceeds as follows.

- (4) i. The probing head H may be any functional head above the subject and object (I show evidence from morphology that this is  $\text{Fin}^\circ$ );
- ii.  $\text{Fin}^\circ > \text{ERG} > \text{ABS}$ : The structural configuration is the same as for the indirect and direct object in the ditransitive domain,  $v^\circ > \text{IO} > \text{DO}$  (Nevins 2007, 2011);
- iii. After  $\text{Fin}^\circ$  is merged in the embedded clause, it establishes Multiple Agree with the ergative and absolutive arguments in its c-command domain;
- iv. Both arguments have no/unmarked/default values for both features  $[-\text{Auth}]$ ,  $[-\text{Part}]$ ; ... (waiting till the matrix subject gets merged)
- v. Person is computed and arguments get their  $\pi$ -values (Sigurðsson 2004);
- vi. Due to previously established Multiple Agree, assigned  $\pi$ -features are transmitted to  $\text{Fin}^\circ$  by feature sharing;
- vii. The resulting representation is checked for two conditions on MA: Contiguous Agree and Matched Values (Nevins 2007, 2011);
- viii. Depending on the probe's value-relativization in a given language, some combinations are licit and some are illicit;
- ix. If a combination is licit, the verb agrees with both arguments, but only agreement with the subject is seen on the surface, due to language-specific morphological restrictions;
- x. If a combination is illicit, a repair strategy applies to fill in the obligatory morphological slot for agreement: the verb agrees with either the object or an argument with a specific  $\pi$ -value (cf. Rezac 2011 on repair strategies in PCC violations);
- xi. Different types of eccentric agreement in Dargwa, see (a)–(c) above, are simply different types of PCC (strong or weak) combined with one of the two repair strategies: Strong/Weak PCC + late insertion of [addressee] or object agreement as repair.

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## Local modeling of the gap/resumptive complementarity under top-down Case attraction

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**1. Intro.** Deriving the complementarity between gaps and resumptives holding in some languages presents a challenge to local derivational bottom-up approaches because the choice between the 2 strategies has to be made at a point where the relevant information (e.g., islands) is not available. Even though there are a few local solutions to this problem (e.g. Müller 2014), we will show, based on a hitherto unnoticed *matching effect*, that *all* previous approaches to the complementarity have to resort to non-local devices. We will argue that together with the novel proposal that the distribution of gaps vs. resumptives should be reanalyzed in terms of Case attraction, top-down derivation allows for the choice to be made locally.

**2. Data.** Languages that form relative clauses (RC) without relative pronouns (RelP) often use resumptives in the relativization of oblique relations. Swiss German for instance uses gap relatives for SU and DO but requires resumptives for IOs (van Riemsdijk 1989):

- (1) a. em Bueb won i (\***en**) mag<sub>acc</sub> b. de Bueb won i \*(**em**) hilf<sub>dat</sub>  
the.DAT boy C I him like the.NOM boy C I he.DAT help  
'to the boy I like' (DO) 'the boy I help' (IO)

What has gone largely unnoticed is that in some of these languages, resumption is subject to a matching effect: the resumptive is omitted if the head noun (HN) bears the same Case, see Hodler (1969) (cf. Cole 1976, Joseph 1980, Gračanin-Yuksek 2013 on Hebrew, Greek, Croatian):

- (2) Lüte, [won es \_ / \***ene** guet geit<sub>dat</sub>], darf me nid söttig Sachen uftische<sub>dat</sub>.  
people.DAT C it they.DAT good goes may one not such things confront with  
'One shouldn't confront people who are doing well with such things.' *Bernese German*

In (2), the choice between gap/resumptive must be made when V merges with the relative operator (RelOP). But the information necessary to make the correct choice (the Case of the HN) is not yet available. Previous approaches usually motivate dative resumptives by treating IOs as PPs = islands. Crucially, however, the matching effect shows that dative resumption is unrelated to islandhood: the Case of the HN should not influence the category of IOs.

**3. Claim.** The choice between gap/resumptive can be made locally if (i) their distribution is reanalyzed in terms of Case attraction and (ii) attraction is modeled by means of top-down derivation. The matching effect will fall out automatically as a subcase of Case attraction.

**4. Case attraction and resumption.** We reanalyze the distribution of gaps/resumptives as Case attraction because the 2 constructions share 2 fundamental properties: (i) the form of an element inside the RC depends on the Case of the HN. In resumption, it is the choice between gap/resumptive, while in Case attraction it is the Case of RelP that depends on the Case of HN; in (3), RelP bears the matrix Case and not the RC-internal Case, viz., *gen* instead of *nom*:

- (3) daz er [...] alles des verplac<sub>gen</sub> [des im ze schaden mohte<sub>nom</sub> komen]  
that he all that.GEN abandoned which.GEN he.DAT to damage might come  
'that he abandoned all that might cause damage to him' *M. High German*, Bianchi 2000

(ii) Both constructions are subject to a hierarchy effect: Case attraction is only possible if the matrix Case is more oblique than (or as oblique as) the RC-Case (Grosu 1994): *gen* > *dat* > *acc* > *nom*. Gaps are possible in exactly the same context in a language like Swiss German. Resumptives are obligatory exactly when Case attraction is blocked, i.e. if the Case of HN is less oblique than the RC Case. *In a nutshell*, we propose that Case attraction in languages like Swiss German is obligatory: RelOP takes over the Case of the HN. Crucially, by means of top-down derivation, Case attraction happens early; RelOP then moves to its  $\theta$ -position where the relevant information for the choice gap/resumptive (Case of HN) is thus *locally* available.

**4.1. Assumptions.** Following Richards (1999), Phillips (2003), Guilliot (2006), Bianchi and Chesi (2014), the structure unfolds incrementally from top to bottom, constituents are base-generated in their surface position; arguments move downwards to check  $\theta$ -features of v/V.

AGREE: (i) We adopt a Checking approach: DPs start out with pre-specified Case-values *uCase*;



## Possessives in (three) Sign Languages

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**Background.** Two approaches are currently available for possessive DPs whose possessive relation depends on contextual information (cf. (1)): i) either they are analyzed as the result of a coercion process of the possessum DP (a non-relational noun becomes relational while the pragmatic component lets infer the appropriate relation), as in Vikner & Jensen (2002); or ii) as involving a relational adposition-like element (which surfaces as the possessive marker or the preposition “of” in English), as in Storto (2003).

The **Goals** of this paper are to show: 1) that data from (three) sign languages (SL) support Storto's theory of possessives; 2) that SLs introduce an unexpected puzzle which is still accountable under Storto's theory; 3) that the analysis extends to kinship possessives, thus supporting an approach to the syntax of possessives in which the possessive relation is never encoded by the possessum (Adger 2013).

**Basic pattern.** The distribution of context-dependent possessives distinguishes between cases in which the possessive relation expresses some sort of CONTROL (ownership being the default case), and those cases in which the relation is totally dependent on contextual information. The relevant readings for the example in (1) emerge under the scenarios in 1 and 2 (adapted from Storto 2003).

- (1) John's dogs left

**Reading 1 (CONTROL):** The dogs that John owns/is responsible for left.

**Reading 2 (non-CONTROL):** The dogs that attacked John (or, that crossed John's way, etc.)

- (2) **Scenario 1:** John is a dog-sitter. This morning he walked the dogs through the park when all of the sudden they attacked him. Mary is also a dog-sitter. This morning she walked another group of dogs through the park and all of the sudden the dogs attacked her.

**Scenario 2:** John and Mary own no dogs and love jogging at the park. This morning, John was at his park and a group of dogs attacked him. Mary was at another park and she was attacked by a different group of dogs.

Once this distinction is considered, the following pattern emerges: definite (but also partitive) possessives (cf. (3)a) are always felicitous; indefinite possessives (cf. (3)b) are either infelicitous (#) or marginally acceptable (?) when the possessive relation is other than CONTROL (scenario 2). Italian examples are used in order to get rid of irrelevant syntactic complications instantiated by their English equivalent (Storto 2003).

- (3) a. Poi, [i cani di John] sono scappati  
Then, [the dogs of John] left      Definite DP: [John's dogs left]  
b. Poi, [alcuni cani di Mary] sono scappati  
Then, [some dogs of Mary's] left      Indefinite DP: # or ? Under Scenario 2.

**SL data.** SLs normally have at least two ways to mark possessive phrases (Perniss and Zeshan 2008): either juxtaposition is used (cf. (4)) or an overt possessive marker is (cf. (5)). The data in (4) and (5) are from French SL (LSF), but a similar pattern is replicated in Italian and Catalan SL (LIS and LSC). These data show that the possessive marker (**POSS**) is used in CONTROL scenarios but not in non-CONTROL scenarios.

- |     |                                     |                            |                              |
|-----|-------------------------------------|----------------------------|------------------------------|
| (4) | a. JOHN DOG (ALL) LEAVE             | 'John's dogs left'         | <b>[ok under scenario 2]</b> |
|     | b. MARIA SOME DOG LEAVE             | 'Some dogs of Mary's left' | <b>[ok under scenario 2]</b> |
| (5) | a. JOHN <b>POSS</b> DOG (ALL) LEAVE | 'John's dogs left'         | <b>[# under scenario 2]</b>  |
|     | b. MARIA <b>POSS</b> DOG SOME LEAVE | 'Some dogs of Mary's left' | <b>[# under scenario 2]</b>  |
| (6) | MARIA <b>DE</b> SOME DOG LEAVE      | 'Some dogs of Mary's left' |                              |

The contrast between (4) and (5) shows that LSF (LSC and LIS) has an overt marker for possessives of the CONTROL type, while juxtaposition marks the other type (for similar data in ASL see Abner 2012). LSC is even richer in that it has another overt marker that can be used under scenario 2 (cf. (6)). The marker DE was first described in Quer and GRIM (2008).

SL data also show a puzzle once compared with spoken languages. The contrast between definite and indefinite DPs is somehow lost in SL (cf. (3)b vs. (4)b). Nonetheless, non-CONTROL possessives with

indefinite DPs headed by an n-word are marginal in LSF (cf. (7), where the possessive relation is “Maria drives the bus the kids take”). The same sentence is fully acceptable under the CONTROL scenario 4 in (8).

- (7) **Scenario 3:** Maria works as a bus-driver in the public company. Every morning she takes service on the line 7, which goes through a residential area. On that bus, several kids regularly jump in and go to school.  
a. ?? TODAY [KID MARIA] SICK RIEN 'Today, no kid of Maria's are sick'

Finally, a possessive marker has been documented in LSC that is preferably used to mark kinship relationships. This marker was glossed as “LINKER” in Quer and GRIM (2008). For some signers of LSF and LIS, a similar marker is exclusively used to mark for kinship relations.

- (8) **Scenario 4:** Maria has 7 children.  
a. TODAY [KID LINKER MARIA] SICK 'Today, Maria's kids are sick'

**Analysis.** The fact that SLs have dedicated constructions (and markers) for CONTROL vs. non-CONTROL possessives is evidence that context-dependent possessives cannot be part of the lexical meaning of the possessum (contra Vikner & Jensen 2002), thus favoring Storto's theory. Moreover, SLs provide morphological evidence that the adposition-like element of possessives is not always ambiguous between a CONTROL and a non-CONTROL reading. The entries are given in (9).

- (9) a.  $[[\text{POSS}]] = \lambda x_e \lambda y_e [x \text{ and } y \text{ stand in the CONTROL relation}]$   
b.  $[[\text{DE}]] = [[\emptyset_{\text{juxtaposition}}]] = \text{relational variable (meaning provided by assignment function, Partee 1997)}$

Storto explains the contrast in (3) by assuming that indefinite Ds are ambiguous between entries with or without an existential presupposition (Mislark 1974) and that the latter makes (3)b acceptable (marginality is a side-effect of the fact that presuppositional entries are not the default interpretations for indefinites). The use of signing space makes NP referential indices “iconically” visible in SL (Lillo-Martin and Klima 1990). I claim that this fact makes presuppositional D entries readily accessible (i.e. no need to revert any default), hence (4)b is not degraded under scenario 2. When the existential presupposition is not available, like in the case of DPs headed by n-words, marginality/unacceptability is predicted and found (cf. (7)).

At the syntactic level, SL data support a strong claim about the nature of possessive constructions. Indeed, it seems that at least for kinship relations SLs provide evidence for a dedicated possessive marker. If this is the case, then even those possessive relations which are claimed to be the result of relational NPs are actually due to the presence of an “external” adposition-like element, thus favoring syntactic analysis like the one proposed in Adger (2013) where the meaning of possessive constructions is claimed to be dependent on the presence of a “light prepositional phrase”.

**Conclusions.** This paper provides evidence from three SLs that the meaning of context-dependent possessives is not lexically encoded by the possessum, thus favoring an analysis along the line of Storto (2003). The fact that SLs do not show marginal acceptability in indefinite DPs under non-CONTROL scenarios is because the use of space cancel the bias over indefinite DPs without the existential presupposition. Further data also point toward an analysis of all possessives (not just those that are dependent on contextual information) in which the possessive relation is never encoded by possessum DPs.

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I present a novel analysis of intervention in *Tough*-Movement (TM) based on the idea that there are **perspectival domains** in the syntax. I propose that syntactic dependencies where the links in the chain are evaluated from different perspectives (=attitudes) are illegitimate. I show how such a semantic constraint properly covers the rich empirical ground of TM.

(1) Mary is important to find  $e$ .  
  
 (2) \* Mary is important to John to find  $e$ .  


Syntactic approaches fail to derive the ungrammaticality of (2) for a number of reasons, most notably, because there are instances where expected interveners *fail to intervene*. For instance, in French, an intervening argument is allowed, provided that it's a clitic, (3). Even in English, cases of structurally similar constructions where an infinitival ( $\bar{A}$ )-gap relates to matrix subject do not invoke intervention. In (4), *John* sits between the gap and the subject position, as it must bind the PRO subject of the infinitive. (Note also that *John* is an Experiencer, and so contradicts Hartman's generalization.)

- Generally, syntactic approaches fail because they predict **categorical** intervention effects: All else being equal, if the right structural conditions are met (i.e., there's an intervener), the result should always be ungrammatical.

(5) It's important to John to meet the president. ok <i>de dicto</i> according to John	(6) It's important for John to meet the president. no <i>de dicto</i> according to John
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Moreover, unambiguous Judges are antecedents for logophoric control. For instance, they permit partial control, a diagnostic of logophoric control according to Landau (2015).

- (7) It is important to John<sub>i</sub> [ PRO<sub>i+j</sub> to meet at 6pm ]

Finally, I note that, at least for English, arguments that are not attitude holders are not interveners. For instance, the “failed” intervener *John* in (4) also fails the tests for being an attitude holder. This leads to us to revise Hartman’s generalization:

- (8) *Revised generalization about defective intervention*

Intervention in *Tough-Movement* is triggered by the presence of an attitude holder.

Under the assumption that all clauses come with perspectival operators in the left periphery, which, in the absence of a local binder, are speaker oriented (Pearson, 2013b), then the ungrammaticality of (2) can be attributed to the fact that the individual *Mary* is being interpreted in two perspectival domains, that of the speaker (attitude holder of the matrix clause), and that of *John* (attitude holder of the infinitival clause). Simply, (2) is bad because there are conflicting beliefs about the individual *Mary*. I propose that there is a general constraint against dependencies which have links in two different perspectival domains.

- (9) *The Unique Perspective Criterion (UPC)*

A syntactic object may not be simultaneously evaluated from two different perspectives.

The UPC makes an important prediction: Crossing an attitude holder is grammatical *when both links in the chain are interpreted from the same perspective*. This is the case when the Judge is implicit, i.e., it’s the speaker, yielding (1). Moreover, the UPC predicts that it should be fine to cross anything that’s not an attitude holder. Thus (4) is fine, because *John* isn’t an attitude holder. This also applies to French, where the dative clitics are logophoric centers (Charnavel and Mateu, 2014), but are not attitudinal. For instance, logophoric elements like *propre* (see Charnavel (2011) for how *propre* can be logophoric) are licensed in the presence of a dative clitic.

- (10) Son propre livre lui est difficile à lire *e* (mais pas ce de Marie).

“\*His own book was difficult to him to read (but not that of Marie).”

However, there is no *de re/de dicto* ambiguity according to *lui*, thus “movement” past clitic interveners is predicted to be acceptable.

**Implications.** This work proposes a semantic constraint on syntactic structures with wide-ranging implications, all of which, admittedly, cannot be explored here.

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We propose that constituent pseudo-relatives (PRs) in Italian are headed by a null determiner, which is responsible for mediating an AGREE relation between the subject within the PR and external probes, in a fashion similar to suggestions for Long Distance Agreement (LDA) in Basque (Preminger 2009) and Tsez (Bjorkman and Zeijlstra 2015). As evidence, we show that what was taken by Cinque 1992 to be an instance of garden-variety subject-verb agreement is actually an instance of PR subjects optionally triggering  $\phi$ -agreement outside their clause. We will explore how this view of Italian LDA can shed light on restrictions in LDA more generally.

**Background** PRs (highlighted in (1)) are finite constructions in which the subject appears before the invariant complementizer *che* and a clause with a subject gap (Radford 1977, Kayne 1975, 1981, Burzio 1986, Guasti 1988, Rizzi 1992, Cinque 1992, Casalicchio 2013, a.o.).

- (1) Ho visto **Gianni che correva**.  
I.have seen Gianni that run.IMPF  
‘I saw Gianni running.’

Cinque 1992 argued that constituent PRs are structurally and semantically ambiguous, based on the agreement options in (2). Matrix T can agree with the PR as a whole (3SG in (2a)) or with the pre-complementizer DP (hereafter  $DP_S$ ) (3PL in (2b)). This agreement option is possible not just with copulas (data not shown).

- (2) a. [Carlo e Paolo che ballano il tango] è uno spettacolo da non perdere.  
Carlo and Paolo that dance-PRES the tango **is** a sight to not miss  
b. [Carlo e Paolo che ballano il tango] **sono** uno spettacolo da non perdere.  
Carlo and Paolo that dance-PRES the tango **are** a sight to not miss.  
‘Carlo and Paolo dancing the dance is/are a sight not to be missed.’

Cinque argued that (2a) is a event-denoting CP (where  $DP_S$  is predicated of the *che*-clause), hence matrix singular agreement with the whole PR. The PR in (2b), Cinque claimed, is a DP that denotes the ordinary individuals *Carlo and Paolo*, hence plural agreement, and the *che*-clause is a type of DP-internal adjunct (Akmajian 1977).

- (3) a. [ $CP$  [ $DP_S$  Carlo e Paolo] [ $PR_{pred}$  che ballano]]  $\rightsquigarrow$  event-type CP; = (2a).  
b. [ $DP$  [ $DP$  Carlo e Paolo] [ $PR_{pred}$  che ballano]]  $\rightsquigarrow$  individual-type DP; = (2b).

Our claim is that both (2a) and (2b) have the same structural and semantic analysis: both are event-denoting DPs, headed by a null  $D_C$ , which selects for a PR CP containing a subject  $DP_S$  and a  $C'$  predicate (4). The agreement seen in (2b), we show, is simply optional agreement reflecting AGREE between  $DP_S$  and external probes mediated by  $D_C$ .

- (4) [ $DP$   $D_C$  [ $CP$  [ $DP_S$  Carlo e Paolo] [ $C'$  che ballano]]]  $\rightsquigarrow$  event-type DP; = (2a,b)

**Evidence** We show that plural agreement in (2b) cannot be attributed to the fact that the construction is an individual-denoting expression. Rather, plural agreement is still possible even when we ensure that PR denotes an event. This is demonstrated in (5). In (5a) we see that that the ordinary-individual denoting DP *Carlo e Paolo* cannot be predicated of *sono un evento* (5a), unlike the event-denoting noun *destruction*. Crucially, however, plural agreement is possible in (5b) when the subject involves a PR.

- (5) a. [\*Carlo e Paolo] / [La distruzione di Roma] sono/era un evento da non perdere.  
C. and P. / the destruction of Roan are/was an event to not miss.  
‘Carlo and Paolo are an event not to miss.’

- b. [Carlo e Paolo che bestemmiano] sono/è un evento da non perdere.  
 Carlo and Paolo that swear BE.3PL/BE.3SG an event to not miss.  
 ‘Carlo and Paolo swearing are/is an event not to miss.’

The grammaticality of (5b) is unexpected if the subject is an individual-denoting DP (3b). If the PR here is an event-denoting expression (3a), it is the exceptional agreement that requires explanation. There is, in fact, good reason to doubt that a construction like (3b) even exists. Predicates that only select for (stages of) ordinary individuals, like ‘walk’, do not accept PRs, unexpected if (3b) exists:

- (6) \*Gianni e Maria che si vestono da soldati camminano sul palco.  
 G. and M. that SE dress as soldiers walking.3PL on stage.  
 ‘G. and M. dressing as soldiers were walking out on stage.’

Further, event-denoting PRs distribute like DPs (not CPs), suggesting that (4) is correct. While PRs can occur in the prepositional complement of the noun *evento* (7a), neither ordinary individual-denoting DPs nor standard CPs can appear here (7b).

- (7) a. L’evento [<sub>PP</sub> di [<sub>PR</sub> Carlo che balla il tango ]] è da non perdere  
 The.event of Carlo that dance-PRES the tango is to not miss  
 ‘The event of Carlo dancing the tango is not to be missed’  
 b. \*L’evento di [Carlo] / [<sub>CP</sub> che Carlo ha ballato ] è da non perdere.  
 The.event of Carlo / that Carlo has danced is to not miss.  
 ‘The event of Carlo / that Carlo has danced is not to be missed.’

We conclude that all constituent PRs have the structure in (4), and that exceptional agreement (2b) reflects a more widely available type of LDA than previously thought. Optional agreement with DP<sub>S</sub> extends to person (8). (The matrix predicate ensures an event-denoting PR.)

- (8) [{Tu/Io} che balli/o] {sei/sono}/è un evento da non perdere.  
 You/me that dance {BE.2SG/1SG}/BE.3SG an event to not miss.  
 ‘You/me dancing is an event not to miss.’

**Analysis** It is already-known that a cross-clausal Case relation exists with PRs: DP<sub>S</sub> in PRs always bears the same case as the PR as whole does (Cinque 1992).

- (9) a. [Io/\*me che fumo per strada ] è uno spettacolo che non raccomando.  
 [I.NOM/\*me that smokes in the.street ] is a sight that not recommend.1SG  
 ‘Me smoking in the street is a sight I cannot recommend.’  
 b. Ha visto [me/\*io che fumavo per strada].  
 He.has seen me.ACC/\*I that smoke-IMPF in street.  
 ‘He saw me smoking in the street.’

Optional  $\phi$ -agreement in (2)/(8) is derived as follows. In (2b), D<sub>C</sub> gets  $\phi$ -valued by DP<sub>S</sub> (an option, since D<sub>C</sub>’s own complement, a CP, lacks  $\phi$  features, Preminger 2009, Iatridou & Embick 1997). D<sub>C</sub> then in turn values matrix T, giving the effect of LDA. (2a) is derived when D<sub>C</sub> takes default 3SG. In both cases, however, Case is passed from T to D<sub>C</sub> to DP<sub>S</sub> (à la Reuland 1983).

- (10) a. T ... [<sub>DP</sub> D<sub>C</sub> [<sub>CP</sub> DP<sub>S</sub> [<sub>C'</sub> che ... ]]] = (2b)  
           NOM/3PL           NOM/3PL  
 b. T ... [<sub>DP</sub> D<sub>C</sub> [<sub>CP</sub> DP<sub>S</sub> [<sub>C'</sub> che ... ]]] = (2a)  
           NOM/DEFAULT.3SG   NOM

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## The Syntax of Participants

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Pursuing insights in earlier work, Ross (1970) and Emonds (1969), we formulate an attempt to understand what we call the Syntax of Participants (SOP). SOP is concerned with a variety of linguistic phenomena that occur at the interface of syntax and pragmatics: sentential particles, allocutive agreement that mark politeness, interjections, and so forth. These share the trait of referencing either the speaker or the hearer, or both. For example, the allocutive agreement in certain Basque dialects agree with the hearer, thus it is always 2<sup>nd</sup> person, despite the fact that there is no 2<sup>nd</sup> person entity in any of the argument positions (Oyharçabal 1993). The allocutive is a regular form of agreement, hence it must enter into a probe-goal relation. Using a modern version of Ross's Performance Analysis proposed by Speas and Tenney (2003) and Haegeman and Hill (2011), we show that the goal of the allocutive is the representation of the Hearer in Ross's performative structure and what Speas and Tenney more recently call the Speech Act Phrase (SAP). Cross linguistically SOP phenomena are highly restricted in distribution, being available only in root clauses. We explore the idea that in fact their distribution reflects Emonds's original conception of the Root: the highest S in a tree, an S immediately dominated by the highest S or the reported S in direct discourse. If this is correct, what Emonds (1969) identified was the distribution of the Speech Act Phrase.

# The relation between phase heads and non-phase heads: Algonquian languages vs. Miyagawa (2010)

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**Introduction:** Feature Inheritance (FI; Chomsky 2007, Richards 2007, Chomsky 2008 is a recent formalization of the dependency between  $C^0$  and  $T^0$ . Miyagawa (2010) employs FI and differences in feature content of  $C^0$  and  $T^0$  in order to account for the variation between languages with respect to movement and agreement. Under this proposal,  $C^0$  in all languages is merged with both  $\phi$ -features and discourse features ( $\delta$ -features, e.g., TOPIC, FOCUS and *wh*) and FI can vary in four ways, as schematized in (1). Of these patterns, only Pattern #4 is unattested.

In this paper I propose that Algonquian languages show us that there are (at least) three ways in which this typology is too restrictive: (1) a single language can only exhibit one of these patterns, (2)  $C^0$  and  $T^0$  cannot both have the same feature, and (3) it is limited to the  $C^0$  phase. I conclude that if we relax all of these restrictions, there are (at least) 7 possible patterns of FI.

**1. One language one pattern?:** An implicit assumption in this typology is that a given language will exhibit a single pattern. However, based on the differences in  $\phi$  and  $\delta$  agreement on  $C^0$  in main and embedded clauses, Lochbihler & Mathieu (to appear) argue that in Ojibwe (and other Algonquian languages) matrix  $C^0$  has  $\phi$ -features while embedded  $C^0$  only has  $\delta$ -features. The presence of  $\phi$ -features on matrix  $C^0$  (Independent Order) can be seen by the characteristic presence of person agreement, e.g., (2a), which is lacking on embedded  $C^0$  (Conjunct Order), e.g., (2b). In addition, clauses with *wh*-phrases can only be used with embedded  $C^0$  and these forms appear with *wh*-agreement shown by the change in vowel quality on the verb ('Initial change'), e.g., the contrast between *gii* in (2a) and *gaa* in (2b).

- |  |  |
|--|--|
| (1) a. <b>ni-gii-bakobii-ise</b><br>1-PST-in.water-fall(IND)<br>'I fell in the water.' | b. <b>wenesh gaa-bakobii-ise-d</b><br>who <b>wh.PST</b> -in.water-fall-3(CONJ)<br>'Who fell in the water?' |
|--|--|

Following the same logic for English and assume the Movement Theory of Control (Hornstein, 1999), we can posit that infinitival clauses have  $C^0$ , but it retains both  $\phi$  and  $\delta$ , which causes the embedded subject to move through embedded  $C^0$  to the matrix clause. This also accounts for the lack of  $\phi$ -agreement on  $T^0$ . In addition, if embedded  $C^0$  were present in infinitival  $C^0$ , it would necessarily have a  $\delta$ -feature in order to allow for long-distance *wh*-movement into the matrix clause, e.g., an object *wh*-phrase can also move into the matrix clause in addition to the embedded subject, e.g., 'What did Mary persuade John to eat?' This would mean that finite  $C^0$  exhibits Pattern #1 while non-finite  $C^0$  exhibits pattern #4 (and fills in the gap in the original typology).

**2.  $C^0$  and  $T^0$  cannot both have the same feature:** Following Miyagawa (2010)'s typology,  $C^0$  can either pass or retain a given feature. Based on agreement and anti-agreement in Berber, Ouali (2008) posits that there is a third possibility: SHARE, in which  $C^0$  passes a feature to  $T^0$  and retains a copy. In addition to Berber, Haegeman & Van Koppen (2012) argue that both  $C^0$  and  $T^0$  both have independent  $\phi$ -feature probes in Limburgian and Western Flemish. The availability of this option is supported by a subset of Algonquian languages that have a restrictive pattern of Long-Distance Agreement LDA in which only the structurally

highest argument can undergo LDA, e.g., LDA is only possible with the embedded 2nd person plural subject in (4a) but not the embedded 1st person plural object in (4b) in Mi'gmaq (Eastern Algonquian).

- (2) a. *gej-ugsi-oq* [ges-al-i-**eg**]  
 know.AN-3>SAPPL-**2PL** [love-AN-1OBJ-**1PL**]  
 'S/he knows that you(-all) love us(ex)'  
 b. \**gej-ugsi-eg* [ges-al-i-**eg**]  
 know.AN-3>SAPPL-**1PL** [love-AN-1OBJ-**1PL**]  
 intended: 'S/he knows that you(-all) love us(ex)'

Hamilton & Fry (to appear) argue that this pattern is derived via a simple  $\phi$ -probe, e.g., EPP feature, on  $C^0$  that triggers movement of the structurally highest argument to embedded Spec-CP and allows this argument to be local enough for agreement with the matrix verb. Additionally, Hamilton (2015b) argues that verbs in Mi'gmaq appear with person agreement which is the result of a  $\phi$ -feature probe on  $T^0$ , as evidenced by tense/mood allomorphy (following Nevins 2011). Since LDA always occurs with embedded finite clauses in Algonquian languages, both  $C^0$  and  $T^0$  in Mi'gmaq must both have  $\phi$ -feature probes. We can see that they are also independent of each other as the embedded argument that undergoes LDA need not be the argument that is indexed on  $T^0$ , e.g., LDA is possible with the embedded 1st person subject in (4a), but not with the embedded 2nd person plural object that is indexed on  $T^0$  in (4b). This presents further evidence that  $C^0$  and  $T^0$  can have the same feature and that they probe independently. Adding SHARE to the original typology results in the addition of the three patterns to the typology in (3).

- (3) #5:  $C_{\phi,\delta}$  &  $T_\phi$  (FI copy of  $\phi$ ) #7:  $C_{\phi,\delta}$  &  $T_{\phi,\delta}$  (FI copy of  $\phi$  &  $\delta$ )  
 #6:  $C_{\phi,\delta}$  &  $T_\delta$  (FI copy of  $\delta$ )

**3. FI limited to  $C^0$ ?:** Although FI in the verbal domain is hinted at by (Richards, 2007), this typology is limited to discussion of FI between  $C^0$  and  $T^0$ . (Hamilton, 2015a) argues for a dependency between  $\text{Voice}^0$  and  $\nu^0$  in Mi'gmaq that parallels the dependency between  $C^0$  and  $T^0$ . Both  $\text{Voice}^0$  and  $\nu^0$  display  $\phi$ -agreement with an animate theme DP in transitives, e.g., *-a* and *-al* in (8a) respectively. However, in ditransitives with animate internal arguments,  $\text{Voice}^0$  can display  $\phi$ -agreement but  $\nu^0$  can only appear with a default form, e.g., *-a* and *-atm* in (8b) respectively.

- (4) a. *elugw-al-a-t-l*  
 fix-AN-3OBJ-3-OBV  
 'S/he fixes it(AN)'  
 b. *elugw-atm-u-a-t-l*  
 fix-DFLT-APPL-3OBJ-3-OBV  
 'S/he fixes **it**(AN) for her/him'

Hamilton (2015a) links the absence of  $\phi$ -agreement on  $\nu$  in ditransitives with the presence of a "high" Applicative Phrase (Pylkkänen, 2008) that blocks the dependency between  $\text{Voice}^0$  and  $\nu^0$ , e.g., *-u* in (8b). If this is the case, then this presents evidence for the presence of a dependency in the verbal domain, and means that the FI typology can be generalized as between phase heads (PHs) and non-phase heads (NPHs) in general, as shown in (5).

- (5) #1:  $\text{PH}_\delta$  &  $\text{NPH}_\phi$  (FI of  $\phi$ ) #3:  $\text{PH}$  &  $\text{NPH}_{\phi,\delta}$  (FI of  $\phi$  &  $\delta$ )  
 #2:  $\text{PH}_\phi$  &  $\text{NPH}_\delta$  (FI of  $\delta$ ) #4:  $\text{PH}_{\phi,\delta}$  &  $\text{NPH}$  (no FI)

**Conclusion:** The typology of FI is more permissive than hypothesized in Miyagawa 2010. Algonquian languages provide insight into a more accurate picture of variation in relations between PHs and NPHs.

**Selected references:** Miyagawa, S. (2010). Why agree? why move: Unifying agreement-based and discourse configurational languages. Richards, M. (2007). On Feature Inheritance. *LI*.

## Shifting Perspectives in Free Indirect Discourse: Implications for Language Processing.

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Language users are clearly sensitive to viewpoints other than their own (e.g., Ferguson & Breheny, 2012). Yet, there is no uniform or determinate way to convey point of view, even though many lexical items, e.g., *beautiful* or *nearby*, seem to require that a viewpoint be assessed for interpretation (Mitchel, 1986, Partee, 1989). Viewpoint has been described in various ways: as an “origo” (Bühler, 1936), an “empathic identification” (Kuno & Kaburaki, 1977), a “judge” (Lasersohn, 2005), an “evaluator” (Patel-Grosz, 2012), or, as we do here, a “perspectival center” (Harris, 2012). Still, little is known about how a perspectival center is calculated by the human language processing system, and we are, at present, left with a wealth of open foundational questions: Given the myriad of potentially relevant information sources, how does the processor determine which perspective is at play? What types of cues signal perspective shift? How do they interact? Is perspective shift costly to process?

Most research takes as its starting point the assumption that a presumptive pragmatic default favors the speaker’s perspective, which then interacts with presentational, surface cues to shift to a non-speaker center (e.g., Smith, 2003, 2009; Harris, 2012), even if the mechanisms motivating these shifts differ dramatically. Many *lexical* and *contextual* cues have been explored experimentally: evaluative terms like epithets (Harris, 2009; Harris & Potts, 2009, 2011; Kaiser & Cohen, 2012; Kaiser, 2015), verbs of saying (Harris & Potts, 2009), as well as subtle prosodic and non-verbal modulations (Harris & Potts, 2011).

In this talk, I turn to how *structural* and *grammatical* cues promote perspective shift in Free Indirect Discourse (FID), typically described as a reportative, literary style in which the perspectival center shifts to a third person in narration, sometimes extending across multiple sentences (e.g., Banfield, 1982; Fludernik, 1993; Sharvit, 2008). While there is no single cue (or even set of cues) that unambiguously signal FID, parenthetical reports, as in *It would be a long and difficult war, prophesized Mary*, in which the reporting verb does not syntactically embed the report, are often thought to strongly indicate a perspective shift (Reinhart, 1983). I present a series of offline and online experiments that manipulate the report type of an utterance and the tense of the sentence that follows. The results confirm that parenthetical report types provide a strong cue for an alternate perspectival center, but also show that all contextual values, like the anchoring of a “contextual now” (Klein, 1994), must be compatible with the report in order to extend a non-speaker perspective in sentences that follow. I argue that the results support an economy based model of perspective processing, in which the processor discourages perspective shifting generally, but may use abduction to better interpret an utterance with what is presumptively expected about the speaker and other discourse agents (Hobbs, 1990).

## Commitment Attribution and Anaphoric Dependencies in Free Indirect Discourse

In the following examples underlined sentences represent so-called free indirect discourse (FID):

- (1) Today she was in here to think, no tears would be shed. She promised that to herself.
- (2) Thus she spent all day and the next morning, again took the blanket and the pillow and the little volume of Stevenson, and went into the garden. So will she now live, in the garden under the Akazen, no matter what happened in the world.
- (3) I was struck by the willingness of almost everybody in the room, the senators as eagerly as the witnesses, to exchange their civil liberties for an illusory state of perfect security. They seemed to think that democracy was just a fancy word for corporate capitalism [...] Why humor people, especially poor people, by listening to their idiotic theories of social justice?

Example (1) is a paradigmatic case of FID as it is studied by formal semantic theories: it combines features of both indirect and direct discourse in that personal pronouns and tenses express the perspective of the reporter (narrator), while all other material (temporal adverbials etc.) express the perspective of the reportee (protagonist). Example (2) – which is a translation from Russian preserving the tenses of the original (see Fludernik 1993 on FID in Russian) – is different insofar as only the personal pronoun, but not the tense, belongs to the narrator's perspective. In (3), finally, there are no tenses and pronouns that should be interpreted with respect to the narrator's context, but the sentence is naturally read as FID nonetheless.

Formal semantic theories of FID developed in recent years (cf. Schlenker 2004, Sharvit 2008, Eckardt 2014, Maier 2015) differ greatly not only in the details of their formal treatment, but also in the intuitions about and aspects of FID which they take as central. In effect, while largely successful in explaining what they take to be its main features, they suffer from different but complementary problems – and in trying to solve them face the risk of becoming extraordinarily complex. The objective of this paper is to develop a new way of looking at FID which combines some of the insights of existing theories while offering a simpler account of its properties.

The approach I suggest relies more strongly on pragmatic considerations, but offers also a novel account of the underlying semantics. It is based on intuitive ideas about the literary function of FID and the reader's interpretation of it. With respect to the latter, an important aspect of a reader's interpretation of FID must consist in *recovering* the original utterance or thought through “replacing” (if necessary) the pronouns and tenses actually used in the text by those that *would have been* used by the protagonist. I propose a theory of FID consisting of two components: an account of the pragmatics of discourse interpretation in terms of commitment attribution, which makes place for commitments to be attributed to non-speaker agents, and a semantics for pronouns and tenses in FID which treats them as anaphorically dependent on the putative pronouns and tenses in the “recovered” original utterance (or thought) of the protagonist. The semantic component is entirely subordinated to the pragmatic one and in fact optional: in instances such as (3), the target sentence is interpreted in a standard way semantically, but pragmatically its content is construed as a commitment of the protagonist rather than the narrator.

## 1. COMMITMENT ATTRIBUTION

To account theoretically for the interpretation of FID-sentences as representing protagonist's rather than narrator's utterances, I propose a model of discourse update which keeps track, besides the common ground, of individual commitments of discourse participants (cf. Farkas and Bruce 2010). Following Morency et al. 2008, I focus on *commitment attribution* as an element of hearer's interpretation, rather than commitment as a speaker category. Importantly, in this sense, commitments can be attributed to other agents besides the speaker, e.g. in indirect reports. This idea can be combined with the "scorekeeping" account of Lewis 1979 to yield an abstract model of hearers' interpretation in discourse. In this sense, commitment attribution is the hearer's way of tracking a speaker's conversational moves. In the case at hand, the reader keeps score by attributing commitments separately to the narrator and to the protagonist(s). In an example like (3) nothing else is needed to obtain the intended reading of FID. In examples like (1)-(2) the putative original utterance represented by the given sentence needs to be recovered first.

## 2. ANAPHORIC TREATMENT OF PRONOUNS AND TENSES IN FID

Hunter 2014 argues against a traditional distinction between extra-linguistic context dependency (indexicals, demonstratives) and discursive context dependency (anaphora), and proposes a unified account of both based on a generalized DRT-style treatment of anaphora. On this account, structured discourse contexts contain antecedents for expressions that refer to entities in the extra-linguistic context. The distinction between two kinds of context-sensitivity is preserved in different resolution strategies for indexical and anaphoric (uses of) expressions.

I propose to extend this account to the use of pronouns and tenses in FID and to treat them as anaphorically dependent on antecedents in the putative original utterance of the protagonist – pronouns and tenses that *would have been* used in the original utterance. This requires an interpretation for FID-sentences which takes the structured context to contain the extra-linguistic parameters (speaker, time etc.) of the original utterance, which provide the antecedents for FID pronouns and tenses. Such an interpretation conforms to the pragmatic mechanism described above in section 1: the resolution of anaphoric dependencies of narrator-oriented elements makes it possible to "recover" the form of the original utterance, which can then be interpreted in a standard way, but as the protagonist's, not the narrator's speech or thought.

As a background for this approach to FID, consider the following example of simple ID:

(4) [John:] I am sick.

(5) John said that he was sick.

One way of understanding the role of the pronoun and tense in the report is to treat them as anaphorically dependent on antecedents in the reported utterance: *he* in (5) picks out the referent of *I* in (4), past tense refers to the time to which present tense referred originally. Note that in non-SOT languages such as Russian, the present tense will be used in the report. It can be taken to be a simple fact of the respective grammars that the anaphoric dependent in an indirect report, of which the present tense is the antecedent in the original, is the past tense in English and present tense in Russian. This easily extends to FID, accounting for the difference between (2) and (1). Another advantage of this approach is that it deals easily with the use of pronouns with non-matching gender features, and potentially also with the use of proper names to refer to the addressee. (See Maier 2015 for the most recent discussion of both problems.)

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## Allocutive agreement through mesoclis

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This paper focuses on the mesoclis in (1b), which involves the 2<sup>nd</sup> person plural suffix and the reflexive clitic pronoun in Romanian imperatives. Romanian studies on these constructions attribute the mesoclis to morphophonology (Byck 1935; Morariu 1921; Mării 1969 a.o.).

- (1) a. *Duceți-vă în cel sătcel* **default**  
 go.2PL=REFL.2PL in that hamlet  
 ‘Go into that hamlet’ (NT {26v}; mid17<sup>th</sup> c.)
- b. *Duce-vă-ți de la mine* **marked/mesoclis**  
 go.REFL.2PL= 2PL from at me  
 ‘Go away from me’ (Antim {354}; mid18<sup>th</sup> c.)

The most influential formal and cross-linguistic studies on similar constructions also define this type of mesoclis as a PF only phenomenon (Harris & Halle 2005; Arregi & Nevins 2015).

The analysis proposed here counters a PF approach to (1b) by arguing that the mesoclis arises in narrow syntax, and that the relevant operations can be optimally captured in a framework that allows for the syntactization of speech act features. More precisely, the morpheme ți is a suffix marking the subject-verb agreement in (1a), but a clitic marking the allocutive agreement in (1b). Furthermore, the diachronic perspective applied to data as in (1) suggests that mesoclis may be reanalyzed outside narrow syntax (i.e. at PF) when semantic bleaching takes place by eliminating the allocutive agreement.

**Data in diachrony.** (1a) is the default imperative clause in Old and Modern Romanian. Before the emergence of (1b), the short-lived variation in (2) is attested (17<sup>th</sup> c.), where ți is absent, while the reflexive vă marks both reflexivity and subject-verb agreement for 2<sup>nd</sup> person plural.

- (2) *Întoarce-vă către mine*  
 turn.IMP=REFL.2PL towards me ‘Return towards me’ (NB 10,211/10)

By mid-18<sup>th</sup> c., (1b) emerges in reflexive verbs and is preserved in modern regiolects. By mid 19<sup>th</sup> c., further variation develops, where (1b) applies not only to reflexives but also to active verbs, allowing for free substitution of the clitic vă plus ți reduplication, as in (3).

- (3) *cătați-le-ți*  
 search.IMP.2PL=them=2PL ‘search for them’ (Frâncu 1981: 87)

In Modern Romanian, the alternation (1a/1b) is free for some speakers, while for others it involves a switch in the pragmatic interpretation (Morariu 1921; Istrătescu 1937; Mării 1969). I propose that the latter group uses (1b) when in need of allocutive agreement marking, because:

- The option for (1b) over (1a) arises when the speaker discriminates between men versus women addressees, or children versus adults; i.e., the switch concerns the biological properties of the addressee, which is the definition of allocutive agreement (Trask 1997)
- (1b) arises after the familiar attention drawing particle *ni* disappears from texts; i.e., it fills up a gap for a formula of direct address.
- A mismatch may arise between subject-verb agreement and mesoclitic ți – see (4) with the subject in singular while ți is plural; here, ți indicates a child as the addressee.

- (4) *mărturisește-te-ți la biserică*  
 confess. IMP.2SG=REFL.2SG=2PL in church ‘Confess (your sins) in church!’

- Mesoclitic ți is also seen in the absence of verb inflection, i.e. on gerunds – see (5).

- (5) *bucurându-vă-ți*  
 enjoying= REFL.2PL=2PL ‘enjoying yourselves’ (Frâncu 1981: 89)

**Previous (formal) accounts.** Formally, mesoclisism as in (1) has been discussed on the basis of Spanish imperatives, which show the clitic cluster variation in (6) for ‘Sell it!’.

- (6) a. *Véndan-lo* b. *Vénda-lo-n* c. *Véndan-lo-n*  
 sell.IMP.2PL=it sell.IMP=it=2PL sell.IMP.2PL=it=2PL

The exclusive PF approach in Harris & Halle 2005 relying on Generalized Reduplication was countered by a morphosyntactic approach in Kayne 2010; Manzini & Savoia 2011. Arregi & Nevins 2012, 2015 reinforce the PF approach but import Kayne’s Restriction rule on clitic distribution. Briefly, while the PF analysis relies on clitic alternations, the morphosyntactic analysis considers that (6) arises at the sub-word/lexical level by rules of constituent Merge previous to the Merge of the clitic cluster with C/I. Crucially, both approaches rely on free alternation, morpheme ordering outside narrow syntax, and involve identity of the enclitic and mesoclitic morpheme. So they fail to grasp the main properties of (1)-(5), i.e.: (a) the change in interpretation re: allocutive agreement; and/or (b) the mismatch in phi-features (see 4,5).

**Proposal.** This paper proposes, instead, that (1)-(5) arise from narrow syntax computations that map speech act features at the left periphery of clauses. This can account for the switch in interpretation and for the use of *ti* independently of subject-verb agreement.

**Analysis.** I start from the assumption that imperative clauses involve V-to-C (Rivero & Terzi 1995; Isac & Jakab 2004 a.o.) and that a speech act field (saP/SAP) is mapped above CP (Speas & Tenny 2003), introducing the speaker’s point of view and the addressee (2<sup>nd</sup>) features. The latter subsumes the allocutive agreement (Miyagawa 2012), as needed, and is responsible for licensing the phi-features of imperative C/T (Zanuttini 2008; Isac 2015). Accordingly, (1a) has the structure in (7), where the addressee [2<sup>nd</sup>] and the subject are coreferent.

- (7) [<sub>saP</sub> [pov] [<sub>SAP</sub> [2<sup>nd</sup>] [<sub>CP</sub> *Duce~~ti~~* [<sub>KLP</sub> *vă* [<sub>TP</sub> *Duce~~ti~~* [<sub>VP</sub> *Duce~~ti~~*]]]]]]]

The construction in (2) treats *vă* as a suffix for both reflexivity and phi-features in C/T, so (8) follows from (7) minus CliticP (KLP), and allows for the reanalysis of *ti* outside C/T.

- (8) [<sub>saP</sub> [pov] [<sub>SAP</sub> [2<sup>nd</sup>] [<sub>CP</sub> *Întoarce~~vă~~* [<sub>TP</sub> *Întoarce~~vă~~* [<sub>VP</sub> *Întoarce*]]]]]]]

(1b) arises from the reanalysis of *ti* upward the tree, as a clitic in SA, and V-to-sa takes place:

- (9) [<sub>saP</sub> *Duce~~vă~~* [<sub>SAP</sub> *ti* [<sub>CP</sub> *Duce~~vă~~* [<sub>TP</sub> *Duce~~vă~~* [<sub>VP</sub> *Duce*]]]]]]]

The allocutive/clitic status of *ti* depended on the affixal analysis of *vă*. Once the allocutive function is established (19<sup>th</sup> c.), affixal and clitic *ti* can concur (see 3), so *vă* counts as a clitic only and can be replaced with other clitic pronouns (e.g., *le* in 3); [pov] in sa-head probes for CP to Spec,saP (see 10), as V remains in C and supports the clitics in KLP (V-oriented clitics).

- (10) [<sub>saP</sub> *căta~~ti~~-le* [<sub>SAP</sub> *ti* [<sub>CP</sub> VP [<sub>CP</sub> *căta~~ti~~* [<sub>KLP</sub> *-le* [<sub>TP</sub> *căta~~ti~~* [<sub>VP</sub> *căta~~ti~~*]]]]]]]]]

**PF variation.** Speakers for whom the alternation in (1a/b) is free have lost the allocutive agreement analysis of *ti*. For these speakers, the clitic cluster can contain more than one clitic pronoun (e.g., *căta~~ti~~-mi-le-~~ti~~* ‘search.IMP.2PL-for.me-them-2PL’) but generalized reduplication does not apply within the cluster (compare Sp. *venda(n)-me-(n)-lo-(n)* with Rom. *căta\*(~~ti~~)-mi-(~~\*ti~~)-le-(~~ti~~)*), despite the favourable syllabic environment (i.e., onset-nucleus). Hypothesis: the mesoclisism is being reanalyzed as a PF phenomenon, but the process is in the beginning stages.

**Conclusions.** Allocutive agreement and morpheme selection in Romanian data as in (1) cannot be grasped under PF or lexical approaches to mesoclisism, but only under a narrow syntax analysis that integrates the mapping of speech acts. This analysis does not invalidate the previous approaches to similar cross-linguistic phenomena where mesoclisism is independent of interpretation, but points out that this phenomenon may have originated as a narrow syntax operation, with further reanalysis at PF when the allocutive agreement was lost.

Speas and Tenny (2003) have argued for the existence of a special syntactic layer above the CP node (see also Hill 2014), labelled the *Sentience Domain*. This syntactic domain encompasses (at least) two projections, the *Speech Act Projection* and the *Sentience Projection* (1), illuminating some non-trivial aspects in the syntactic encoding of the pragmatic force and sentience.

- (1) a. *Speech Act Projection* [<sub>SAP</sub> Speaker SA [<sub>SA\*</sub> (utterance content) [<sub>SA\*</sub> SA (hearer)]]]  
 b. *Sentience Projection* [<sub>SEALP</sub> Seat of Knowledge EVAL [<sub>EVIDP\*</sub> Evidence [<sub>EVIDP\*</sub> Evid S]]]

This paper provides further arguments for the syntactic projection of the Sentience Domain. More specifically, it shows that it can derive in a straightforward manner some otherwise puzzling properties of indirect evidentiality (IEv) in (Romance) languages where this class establishes *morphological syncretism* with other T(ense) A(spect) M(ood) categories (Chafe and Nichols 1986, Izvorski 1997, Palmer 1986, Comrie 1978, Tomić 2003, Chung 2012, Aikhenvald 2004, Iatridou et al. 2003, etc.). **The data.** Cross-linguistically common (Comrie 1978, Izvorski 1997, a.o.), the IEv – TAM syncretism is particularly salient in Romance, where counterfactual (CF.) conditional (COND.) and future (FUT.) morphology have been shown to also permit IEv readings (Coşeriu 1977, Squartini 2001, Ippolito 2002, 2013, Giorgi and Pianesi 2004, Delfitto 2004, Hill 2011, Irimia 2010, etc.). The syncretism is seen in (2) with the Italian COND:

- (2) Il presidente *avrebbe lasciato* Roma ieri, ... *Italian*  
 The president COND.3.SG leave.PST.PRT Rome yesterday.

CF: ‘The president *would have left* Rome yesterday, ..... (if he had had the time).’

IEv: ‘The president *left* Rome yesterday (apparently/according to hearsay).’ (Squartini 2001)

Within and outside Romance both descriptive and formal accounts have pointed out crucial differences between IEVs and their TAM homophones (see Izvorski 1997 for IEVs from the *present perfect*, a.o.), which point toward syntactic differentiations. However, the nature of IEv vs. TAM delimitations is still poorly understood. This paper proposes that this syncretism can be disambiguated syntactically, building on three main assumptions: **i)** Speas’ (2010) implementation of IEVs. as categories of the indicative; **ii)** analyses that use real Tense heads merged above modal heads (Ippolito 2002, 2013, Arregui 2009, etc.); **iii)** canonical decompositions (formalized semantically in Izvorski 1997, following crucial insights in Comrie 1976) of IEv as a category which encompasses two types of features: *distancing* (speaker has not witnessed an eventuality directly) and *inclusion* to the deictic center (speaker gets to know about the eventuality via its results or indirect evidence). We show that what sets the IEv apart is the presence of deictic features at a syntactic layer [Eval] above the modal projection(s). In Romance languages these deictic features are computed as temporal specifications which are set to strict PRESENT (speaker’s deictic center) and therefore block forward-shifting and temporal ‘mismatches’.

**The account. I.** Speas (2010) has put forward an apparently surprising assumption: IEVs do not specify a type of quantification - they simply give the speaker more information about the relevant accessible situations (the nature of the evidence the assertion is built on), and therefore they should be seen as categories of the *indicative* (see also Jakobson 1957). Across Romance this creates an apparent tension with the morphology which is overtly and systematically *modal* (as seen in 2, 3, 8). However, less explored diagnostics do detect their ‘*indicative*’ behavior. For example, IEv built with ‘COND’ morphology can be embedded under *if* (this possibility also distinguishes them from general epistemics, as also shown by another test in 8). However, when the COND morphology in the antecedent is interpreted as IEv (as opposed to a CF), the consequent can only contain *indicative* morphology. The example in (3) from another Romance variety, namely Romanian (as the morphology is less ambiguous than in other Romance varieties) clearly illustrates this. The CF reading of COND on the other hand requires COND morphology in the consequent (4):

- (3) Dacă *ar fi plecat* ieri/\*mâine, așa cum se spune,  
 If COND/IEv.3 be leave.PERF yesterday/\*tomorrow, as how SE say.3.SG  
 atunci *e deștept*. *Romanian*  
 then be.INDIC.PRES.3.SG smart.M.SG  
 IEv only - ‘If it is true that he *left* yesterday (as they say), then he’s smart.’

(4) Dacă ar fi plecat ieri/mâine, atunci *ar fi fost* deștept.

CF only - 'If he had left yesterday/tomorrow, then he would have been smart.'

The contrast between (3) and (4) hence illustrates that the structure of IEV is more complex than what meets the eye. **II.** Examples (3) and (4) also show that the IEV use is distinct from CF in yet another respect – although the sentence in (4) contains a CF about the past FUT adverbials are possible (the problem of 'mismatched' temporal adverbials in CF – see recent discussions in Iatridou 2000, Ippolito 2002, 2013, Arregui 2003, etc.). The IEV blocks this interaction (3), although epistemics do permit it (see the pan-Romance imperfect). An illuminating structural account for the permissibility of *future* adverbials with overt *past tense* morphology in CF is provided in Ippolito (2003, 2006, 2013). Noticing that CF uses *past tense* morphology cross-linguistically (the English gloss in 4, see also James 1976, Iatridou 2000, Comrie 1976, etc.), Ippolito (2002, 2006, 2013) proposes the structure in (6) for a CF. Structurally, this translates into a PAST tense head (manipulating the accessibility relations) merged above the modal head (WOLL). Therefore FUT adverbials are still possible:

(5) If he left tomorrow, he would be happy. (6) PAST (WOLL (he leave tomorrow))(he happy))  
As the IEV does not contain a layer of PAST merged *above* the modal, FUT adverbials are predicted to be *impossible* (they would give rise to temporal clash). IEV should thus have the structure in (7), as also seen in Condoravdi (2001):

(7) IEV: WOLL (PAST (he leave tomorrow) (he smart)))

However, we claim that the structure in (7) cannot be sufficient. If no further temporal layer is merged above the modal, non-past IEV are predicted to behave like run-of-the mill non-past epistemics whose characteristic property is *forward-shifting* with eventive predicates (Condoravdi 2001, Stowell 2004, etc.). This is clearly seen in English (He may write *tomorrow*; He will come *tomorrow*). This type of future-orientation is generally assumed to be contributed by the features of the modal (Kratzer 2001). Crucially, IEV do not easily tolerate forward shifting. This is seen with the Romanian present IEV in (8) which illustrates an inferential IEV built from the FUT modal. In spite of the overt FUT modal morphology, FUT adverbials are not possible and this sentence cannot have a FUT meaning. This pattern in fact confirms exceptionless observations by typologists that evidentials cannot be about the future (various contributions in Chafe and Nichols 1986, a.o.).

(8) **O** fi dormind acum/\*mâine. Romanian  
FUT./INFER3.SG be sleep.GER. now/tomorrow.

'I infer that s/he might be sleeping right now.'

**III.** We are therefore left with a non-trivial question. If IEV have *indicative* behavior and do not tolerate 'forward shifting', why do we see systematic *modal* morphology cross-linguistically? As already mentioned, our solution to this tension makes crucial use of the Speas and Tenny's *Sentience Domain*. The intuition is that the IEV contains a PRESENT temporal layer above the modal. The ingredients are as follows: First, what is spelled out as the modal is simply the contribution of *the modal base* (encoding the source). We hypothesize that in some (IE) languages the only way to lexicalize sources of information in the verbal domain is through modal morphology - as modals always contain a modal base. Secondly, (hearsay) IEV are special in that they encode relationships between the event being reported and the event through which the speaker came to know what is being reported (Jakobson (1957), Nikolaeva (1999)). We assume here that the latter is encoded in the Evid head (it appears thus that IEV require both a feature in the utterance content and a Speech Act feature in some languages). These relationships are established at the speaker's deictic center (Eval, 9), whose features are realized as a *strict* PRES (in Romance languages, and beyond). This high PRES (which thus cannot occur under the scope of a yet higher tense – see Stowell 1995) blocks the presence of future adverbials, derives the 'indicative' behavior of IEV, therefore explaining why it cannot be about the future.

(9) [<sub>EVALP</sub> Seat of Knowledge EVAL = PRESENT [<sub>EVIDP</sub>\* Evidence [<sub>EVIDP</sub>\* Evid S]]]

Given this syntactic decomposition, an answer to the robust syncretism IEV – TAM can be formulated – the homophony simply signals configurations which have in common the presence of a temporal layer *above* the modal node. We also assume that the specifier of SAP is an expletive in IEV (see Speas and Tenny 2003 for speculations in the same direction), thus accounting for the (obligatory) presence of impersonal evidential particles as in (3).

# Syntactizing discourse particles in Arabic: evidence from a three-tiered speech acts structure in Tunisian Arabic (TA)

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In TA, three discourse particles express three distinct speech acts. Each differently characterizes the nature of relations among the interlocutors. Consider the conversational import and interpretive properties of the particles (in bold) in (1-4).

- (1) a. **ti** 'i:- ja - :! prt imp-come.2sm/f "For God's sake, come!"  
 b. **ti** qu- t- lu: ʃ- i: ? prt tell-prf-3sm-Q-3sm "I wonder whether you told him or not!"

The particle *ti* conveys injunction. The speaker in (1a) is ordering the hearer to come. Tension rises among interlocutors making the injunction firmer as in (1b). Thus, the interpersonal values of *ti* ; i.e., its illocutionary force, indicates how powerful and committed to his utterance the speaker is. Though expressive, *ti* does not alter the truth conditions as *coming* in (1a) and *telling* in (1b) are not achieved at the time of the utterance; hence, *ti* does not change the propositional content of the utterance as much as it does to its expressive and conversational content.

- (2) a. **maw** qul- na:- li- k ɡa:li-ʔ prt tell- prf.1pm/f- to-you wrong.2sm "But what did he think would happen?"  
 b. **ti maw** qul- na:- li- k ɡa:liʔ prt prt say-prf. 1pm/f-to-you wrong.2sm "How often did we tell you were wrong?"

*Maw* in (2a) signals the speaker's conclusive comment ending any doubt conveyed in the proposition of a preceding utterance by the hearer, and inviting him to proceed otherwise. Unlike (1a) and (2b), *maw* shows a weakly committed and less tense speaker with a more blamefully evaluative comment instead of an injunction. In (2b), the combination of *ti* and *maw* indicates the speaker regaining an authoritarian tense attitude in front of an annoying hearer with whom the speaker seeks finishing the conversation.

Consider (3) now.

- (3) a. **ʃa:d** ji- :t PRT come-prf.2sm/f "You SHOULD HAVE come."  
 b. ji-: ti- ʃ, **ʃa:d** ? come-prf-2sm/f- Q prt "What are you waiting for to come?"

Different from *ti* and *maw*, the originally TA verb-based particle *ʃa:d* oscillates, given its position and intonation, between being an aspectual and a pragmatic marker. Internal to the IP domain, it, like any modal, affects the propositional truth conditions of (3a) in view of its residue verbal nature. Beyond IP, it is in (3b) an underspecified speech acts particle standing for an afterthought tagged to the utterance. The clause-initial aspectual *ʃa:D* is stressed voicing the speaker's blame. The falling intonation and the break from the utterance of the non-stressed clause-final *ʃa:d* in (3b) signal a negotiation leading to a settlement with the hearer, hence the mitigated tone. Also possible in TA is the combination of three discourse particles of (1-3) as in (4).

- (4) a. **ti maw ʕa:d** ʃa:f ha: essayed      b. \***ʕa:D maw ti** ʃa:f ha: essayed  
 prt prt prt see.prf.3sm-her the-master      prt prt prt see.prf.3sm-her the-master  
 “How many times have got to tell you!?”

In the ordering of (4a), the mere blame of the aspectual *ʕa:D* in (3a) is reinforced by the evaluative slightly more tense meaning of *maw*, reaching the peak with the injunction spelled-out by the higher *ti* showing a tense uncompromising speaker. The higher in the clause, the more momentum tension gains and the more powerful and more committed the speaker becomes to the propositional content of the clause. Any other order is ruled out as in (4b). This explains why *ʕa:d* loses its rising intonational value and why in such a position in TA it witnesses a reanalysis into a discourse particle. Also, none of the discourse particles in (1-4) is sensitive to sentence typing thus occurring irrespective of declaratives, imperative and interrogatives types, and none affects the truth conditions of the proposition. If so, they are in that position linking the propositional content of the root clause to its discourse structure; the left and right peripheries. In the literature two disparate research tendencies deal with the discourse structure of the clause. Discourse studies (Grice 1975, Sadock & Zwicky 1985 and Krifka 2014) investigate the pragmatic effects of these markers in terms of their force and implicature and conversational import to the utterance; syntactic studies (Rizzi 1994; Cinque 1999) expand the left periphery with discourse projections that are motivated only if constituents bear the related discourse features; topic or focus. Interestingly, the emerging third line is either ‘syntactizing’ discourse seeking some interface between discourse and syntax (Speas & Tenny 2003; Munaro & Poletto 2009; Haegeman 2014), or encoding the phonological aspects of speech acts (D’Imperio et al. 2002; Truckenbrodt 2015). Following Speas and Tenny’s (2003) encoding of the discourse set-up in a speech act layer, this talk elaborates for TA a three-tiered speech act domain selecting ForceP in order to map the conversational import of (1-4) as in (5a). With three speech acts Phrases (saP), (5a) is very much finer-grained a structure than Zimmerman’s (2008) confining of a German discourse particle *wohl* to ForceP as in (5b). Much finer-grained it is than Hill’s (2007) mapping of the particle *hai* in West Flemish (WF) as in (5c), and finer-grained than Haegeman’s (2014) two-tiered structure of WF discourse particles as in (5d).

- (5) a. [<sub>saP1</sub> **ti**... [<sub>saP2</sub> **maw**... [<sub>saP3</sub> **ʕa:d**...]]      b. [<sub>ForceP</sub> **wohl** decl<sub>speaker</sub> [<sub>TopP</sub>...]]  
 c. [<sub>saP</sub> **hai** [<sub>ForceP</sub> ...]]      d. [<sub>saP1</sub> **né** [<sub>saP2</sub> **wè** [<sub>ForceP</sub>...]]]

(5a) enables the three strictly ordered co-occurring discourse particles in TA to project separately in a domain where syntax interfaces with discourse. The lower *saP3* syntactizes the speaker’s weak commitment and compromising tone with the hearer. The higher *saP2* encodes the building up of tension and detachment of the speaker reaching the highest *saP1* syntactizing an authoritarian and uncompromising speaker’s attitude. Top-down, the three layers tightly match tension gradually losing momentum. With this extending of interpretive domains to an articulated speech acts structure, the talk seeks to partake the ongoing endeavour of examining the viability of syntactic analysis of pragmatic markers.

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## **Pronominal patterns in Finnish reported speech and free indirect discourse**

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Many languages have logophoric pronouns referring to the person whose speech/thoughts/feelings are reported; some languages also have antilogophoric pronouns (Culy 1997). I investigated (anti)logophoricity in the pronominal system of Finnish, in particular in reported speech and free indirect discourse. I show that seemingly disparate referential patterns shown by two third-person pronouns can be reconciled if we consider register differences and differences in the scope of logophoricity in reported speech and free indirect discourse.

**Finnish pronouns:** (1a) shows the human pronoun *hän* (s/he) referring to a character in a novel, but in (1b) the same character is referred to with the non-human *se* (it). (2) shows that *hän/se* also alternate reported speech (matrix sub = *se*, coreferential embedded sub: *hän*).

(1a) Sitä **Heikkilä** ei oikein tiennyt. **Hän** oli nukahtanut tuoliinsa...

‘**Heikkilä**<sub>i</sub> didn’t really know that. **He**<sub>i</sub> had fallen asleep in his chair’ (novel, Raittila 2003:202)

(1b) **Heikkilä** loiskautti vettä lattialle. **Se** nousi ylös kylpyammeesta....

‘**Heikkilä**<sub>i</sub> splashed water onto the floor. **It**<sub>i</sub> got up from the bathtub...’ (Raittila 2003:203)

(2) [Context: talking about fishing spots] Kundi luulee omistavansa sen paikan, vaikka mä olin aamulla jo tuntia ennen sitä sillä paikalla. **Se** sano, että **hän** on tään paikan alun perin löytänyt.

‘The guy<sub>i</sub> thinks he owns the place, although I was already there in the morning an hour before him. **It**<sub>i</sub> said that **he**<sub>i</sub> had originally found this place.’

([jippii.fi/jsp/forum/thread.jsp?b=kalastus&t=570](http://jippii.fi/jsp/forum/thread.jsp?b=kalastus&t=570))

What governs the behavior of these forms? One possibility is a **register-driven explanation** based on the differences between *standard Finnish* (used in writing and official settings, uses *hän* ‘s/he’ as default) and *colloquial dialects* (in conversation, uses *se* ‘it’ as default). However, this account is insufficient: (2) (Colloq) and (3) (Strd) show alternating forms within a register.

(3) Snelli ei käsittänyt kuinka tavarat saataisiin pois torilta ... **Se**<sub>i</sub> kyseli oliko **hän**<sub>i</sub> ymmärtänyt...

‘Snelli didn’t understand how the objects could be transported away from the square (...). **It**<sub>i</sub> asked whether **she**<sub>i</sub> had understood....’ (Raittila 2003:115)

A second possibility is a **salience-based account**. Subjects are more salient than objects. Are there correlations between choice of *hän* vs. *se* and the antecedent’s grammatical role? This expectation is *not* supported by the corpus data I analyzed (novels, dialect examples). Both *hän* and *se* refer to subjects (1a,b), and other examples show they both also refer to non-subjects.

The third option builds on the **idea that *hän* has a special use in reported speech in colloquial Finnish**. Many dialects of colloquial Finnish use *se* as the default pronoun and *hän* as a logophoric form in reported speech. Laitinen (2002) notes that *hän* “appears in reported speech or thought and is coreferential with the subject of the speech act or mental verb”, as in ex.(2). Adapting a term from Sells (1987), a logophoric pronoun refers to SELF. The logophoricity of *hän* is shown by the fact that the embedded sentence must match the expressive content of what was said/thought. Imagine the conversation in (4a) between Laura and Tiina (ex. based on Potts 2003). Later, Tiina shows the blue vase to Liisa and reports Laura’s comment with (4b). In (4b), *hän* sounds strange because Laura did not refer to the blue vase as beautiful, and so logophoric *hän* is not appropriate.

(4a) **Laura**: This blue vase is really ugly. The orange vase is much more stylish. Since I can only fit one on my shelf, I plan to throw away the ugly blue vase. **Tiina**: But I think the blue vase is beautiful! You shouldn’t throw it away. **Laura**: Do you want it? Here, take it, it’s yours.

(4b) **Tiina**: **Se**<sub>i</sub> sano että **se**<sub>i</sub>/**#hän**<sub>i</sub> aikoo heittää tämän kauniin maljakon roskeen!

‘**It**<sub>i</sub> said that **it**<sub>i</sub>/**#she**<sub>i</sub> plans to throw away this beautiful vase!’

Thus, in reported speech in colloquial Finnish, (i) *hän* ‘s/he’ triggers a logophoric interpretation and refers to the SELF (subject of speech act/mental verb), and (ii) *se* ‘it’ is the unmarked

pronoun; it is nonlogophoric (not antilogophoric; it can refer to SELF, presumably since *se* is the register default). (Interestingly, fiction also show this usage, as in (3), even if written in otherwise standard Finnish, perhaps via register shifting/use of colloquial rhetorical structures.)

However, this conclusion fails to explain the *hän/se* alternation in (1) with no speech act/mental verb (see also Saukkonen 1967, Hakulinen 1988). Instead, it seems **free indirect discourse** is at play in (1). Free indirect discourse (FID) is a means of signaling a character's thoughts/words without an explicit verb of speaking/thinking, as in (5) (from a novel by Polva 1989:60; translated by me into English). *Hän* refers to Juha (SELF) and *se* to Tiina (NON-SELF).

(5) 'Juha had started walking away with long steps, but when he<sub>JUHA</sub> was sure that he<sub>JUHA</sub> was no longer visible from the bar, he<sub>JUHA</sub> slowed his walking down to a crawl. Tiina could easily catch him<sub>JUHA</sub>, if it<sub>TIINA</sub> left right away, and of course it<sub>TIINA</sub> would, of that he<sub>JUHA</sub> was sure.'

My corpus data show that in FID, *hän* is used for SELF, and *se* for NON-SELF (see also Saukkonen 1967, Hakulinen 1988). However, use of *se* for the NON-SELF is not obligatory; the register-default *hän* can also be used (see ex. in Rouhiainen 2000). Crucially, since FID is used primarily in literature, it is usually in Standard Finnish. Two paradigms emerge:

#### Reported speech (colloquial Finnish)

*hän* → logophoric/SELF

*se* → **non**logophoric (unmarked)

#### Free indirect discourse (standard Finnish)

*hän* → **non**logophoric (unmarked)

*se* → **anti**logophoric/NON-SELF

It seems that the referential properties of *hän* and *se* are very different in reported speech vs. FID. This seems undesirable. I show that we can capture their behavior with *one basic generalization* if we take into account (i) the fact that both reported speech and free indirect discourse are 'logophoric' but *differ in the size of their logophoric domains*, and (ii) the register differences between standard and colloquial Finnish.

Let us first consider the logophoric domain. In (6a), Tiina's mother talks about Tiina getting on a train and forgetting to buy a ticket (but her friend had bought one for her). Now imagine a context where (6b) is inside FID (6c). In reported speech, the matrix subject is not in the logophoric domain ([...]); the embedded subject is. In FID, both are in the domain.

(6a) Tiina's mother: "**Se**<sub>TIINA</sub> thought that [**hän**<sub>TIINA</sub> hadn't bought a ticket]."

Tiina thinks: "**I** haven't bought a ticket." (REPORTED SPEECH)

(6b) Narrator: Tiina: [**Se**<sub>POLICEMAN</sub> thought that **hän**<sub>TIINA</sub> hadn't bought a ticket].

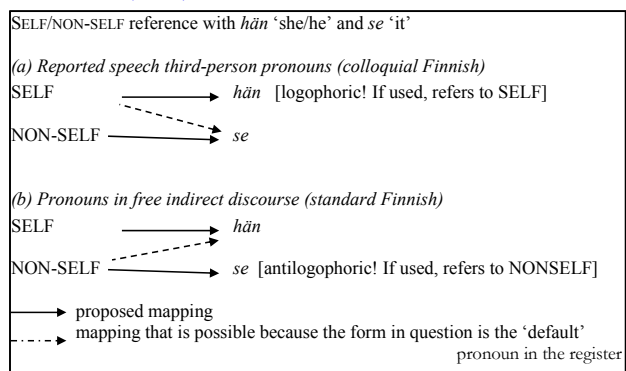
Tiina thinks: "He thinks **I** haven't bought a ticket." (FID)

(6c) Context: *T had bought her ticket the day before; the lady selling tickets now thinks that T hopped on the train without paying, and calls for help. Tiina watched incredulously as the policeman walked into the compartment where she was. Why did this stuff always happen to her?*

If we combine this observation with register differences, we can represent the referential properties of *hän* and *se* in a unified way (s. box) under a general

principle, namely that there is an **association between *hän* and SELF, and *se* and NON-SELF**. The other details can be derived from register differences and the size of the logophoric domain.

Time permitting, I will also present data with **demonstrative *tämä* 'this'** (cf. Hinterwimmer & Bosch 2015 for related work on German). *Se* and *tämä* can both refer to NON-SELF, but with multiple NON-SELF referents, *se* is used for the most salient and *tämä* for less salient ones. Reference resolution theories need to consider both logophoricity and salience.



## Czech embedded root phenomena

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**INTRODUCTION** This paper argues that the Czech particles *že* and *aby* must be allowed to lexicalise different functional heads in the left periphery of embedded clauses. In addition, it argues that CP-doubling in Czech embedded clauses is licensed under the same conditions as CP-doubling in Danish and Frisian embedded clauses. The analysis of the Czech left periphery proposed below improves on the existing analyses by having a broader empirical coverage.

**BACKGROUND** The standard analyses of the Czech left periphery assume that the particles *že* and *aby* are complementisers that appear in a fixed position in the C-domain. Czech clitics have long been argued to appear in the second position within their containing clause. Sturgeon (2008) claims that this position is the highest head of the I-domain, and Lenertová (2001) that it is the lowest head of the C-domain. Both authors agree that the specifier of the phrase whose head hosts clitics could be targeted by movement of various phrasal categories (e.g., DP, PP) with various information-structural status (e.g., topic, focus). According to Sturgeon (2008), the XP can undergo left dislocation to the specifier of a higher functional projection, in which case it is interpreted as contrastive topic. The highest copy of XP is spelled out as a full phrase, the intermediate copy is spelled out as a resumptive pronoun, and the lowest copy is deleted: [<sub>TP</sub> XP [<sub>TP</sub> [<sub>?</sub> Ø ] [<sub>IP</sub> XP → RES [<sub>IP</sub> [<sub>I</sub> CL ] [<sub>VP</sub> ... XP ... ]]]].

**FINDINGS** If *že* and *aby* were always located in the same structural position, then the contrast between (1) and (2) should not arise. (Note: The vertical lines indicate intonation phrase boundaries.)

- (1) Jakub            řekl | že tomu děvčeti    se            dařilo.  
Jacob.NOM said   že that   girl.DAT REFL.CL did-well  
Jacob said that that girl did well.
- (2) <sup>?(?)</sup>Jakub            chtěl    | aby tomu děvčeti    se            dařilo.  
Jacob.NOM wanted   aby that   girl.DAT REFL.CL did-well  
Intended: Jacob wanted that girl to do well.

Interestingly, when left dislocation takes place, the contrast becomes even stronger.

- (3) Jakub            řekl | že tomu děvčeti    | tomu        se            dařilo.  
Jacob.NOM said   že that   girl.DAT    that.DAT REFL.CL did-well  
Jacob said that that girl did well.
- (4) \*Jakub            chtěl    | aby tomu děvčeti    | tomu        se            dařilo.  
Jacob.NOM wanted   aby that   girl.DAT    that.DAT REFL.CL did-well  
Intended: Jacob wanted that girl to do well.

If clitics could move to the higher available head position, then *se* should be allowed to intervene between the left dislocate (i.e., *tomu děvčeti*) and the resumptive pronoun (i.e., *tomu*) in (3). However, as demonstrated below, this is impossible.

- (5) \*Jakub            řekl | že tomu děvčeti    | se            tomu        dařilo.  
Jacob.NOM said   že that   girl.DAT    that.DAT REFL.CL did-well  
Jacob said that that girl, she did well.

**ANALYSIS** The contrasts between the pairs of examples above (i.e., (1)-(2) and (3)-

(4)) can receive a straightforward explanation if it is assumed that clitics occupy a fixed position, and that *že* and *aby* can lexicalise different functional heads. In (1) and (2), *že* is located in C and *aby* in I. The variation in the acceptability of (2) is due to inter-speaker variation: some speakers allow *aby* to lexicalise the C head, and some do not.

- (6) [CP [C *že*/<sup>?(?)</sup>*aby*] [IP DP [IP [I CL] [vP ... ~~DP~~... ]]]]

To explain the (un)availability of the left dislocation under *že* and *aby* in (3) and (4), it is assumed that (3), but not (4), involves CP-doubling.

- (7) [CP<sub>2</sub> [C<sub>2</sub> *že*/\**aby*] [CP<sub>1</sub> DP [CP<sub>1</sub> [C<sub>1</sub> Ø] [IP DP→RES [IP [I CL] [vP ... ~~DP~~... ]]]]]]

Iatridou and Kroch (1992) relate the availability of verb second in Danish and Frisian embedded clauses to the availability of CP-recursion, and note that ‘embedded verb second... is found only in clauses governed by an L-marking non-negative, non-irrealis bridge verb’ (p.7). It appears that CP-doubling in Czech embedded clauses is licensed under the same conditions. Negating the embedding predicate in (3), or modifying it with an epistemic modal, prevents left dislocation from taking place (see (8) and (9)).

- (8) \*Jakub        **ne**řekl | *že* tomu děvčeti | tomu        se        dařilo.  
 Jacob.NOM **not**-said *že* that girl.DAT that.DAT REFL.CL did-well  
 Intended: Jacob did not say that that girl did well.
- (9) \*Jakub        **možná** řekl | *že* tomu děvčeti | tomu        se        dařilo.  
 Jacob.NOM **maybe** said *že* that girl.DAT that.DAT REFL.CL did-well  
 Intended: Jacob might have said that that girl did well.

**CONCLUSION** At first sight, it might seem rather remarkable that CP-doubling in Czech (which is a VO language) should pattern with CP-doubling in Danish and Frisian (which are OV languages). However, on a closer look, it could be observed that both contrastive left dislocation in Czech and embedded verb second in Danish and Frisian are instances of embedded root phenomena. In Czech, left dislocation is almost exclusively found in root clauses. In Danish and Frisian, verb second is typically operative in root clauses. Consequently, it can be proposed that what was labelled above as CP-doubling is in fact an addition of a functional projection encoding illocutionary force. On this view, the highest functional projection in (7) is taken to encode assertoric force. The licensing conditions on ‘CP-doubling’ in Czech follow from the (in)compatibility of the embedding predicate with the embedded speech act: ASSERT>ASSERT (see (3)); \*NOT-ASSERT>ASSERT (see (8)); \*MAYBE-ASSERT>ASSERT (see (9)). As noted in de Haan (2001), the distribution of embedded verb second in Frisian might be explained in a similar vein.

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## A production bias model of the Constant Rate Effect

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Kroch (1989) advanced the hypothesis that when two grammatical options compete across a number of linguistic contexts and one replaces the other over time, the rate of change will be the same in all contexts. To date, this hypothesis has been studied in a number of languages and data sets (Kroch 1989; Santorini 1993; Taylor 1994; Pintzuk 1995; Postma 2010; Wallage 2013) and has accumulated enough support for it to be referred to as the Constant Rate Effect, or CRE (e.g. Pintzuk 2003).

CREs provide a fresh perspective on causation in syntactic change: evidence of a CRE is evidence against the view (e.g. Bailey 1973) that linguistic innovations adapt to linguistic contexts based on their functionality; instead, patterns of use observed in historical data are to be thought of as reflexes of more abstract, underlying grammatical changes. Despite the wealth of empirical studies that over the years have sought to establish CREs in historical data, this central intuition of Kroch (1989) has, however, never been explicated formally in a detailed model of change that takes both grammatical competition and contextual effects into account.

What is more, certain doubts have recently been raised concerning the standard way of detecting CREs in corpus data, which is to fit a number of independent logistic curves, one per each context of interest. Firstly, (1) Wallenberg (2015) and Willis (2015) show that, using this method, CREs can be empirically demonstrated in situations where they cannot be taken to support underlying grammatical unity: across languages and across geographical areas, respectively. On the other hand, (2) customary research practice in diachronic syntax has long acknowledged that fitting a number of independent logistic curves to a set of contexts leaves variation in the time dimension entirely unexplained: it would, in principle, be possible to establish a CRE across two contexts where the change goes to completion in one before it even takes off in another. Together, problems (1) and (2) imply that the standard operationalization of CREs is not sufficient for assuming that a single underlying change has occurred.

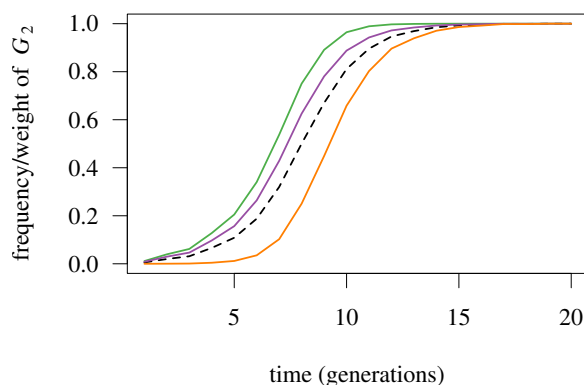


Fig. 1. CRE in a computer simulation.

In this talk, we aim to overcome these problems and to shed light on the nature of causation in language change by introducing a model of the CRE that is more tightly constrained, and therefore makes stronger (more restricted) empirical predictions than the traditional formulation. Starting with Yang's (2000) mathematical model of grammar competition, we augment the model with production biases across an arbitrary number of linguistic contexts. We show that this extension of Yang's framework naturally gives rise to the CRE in computer simulations (Fig. 1).

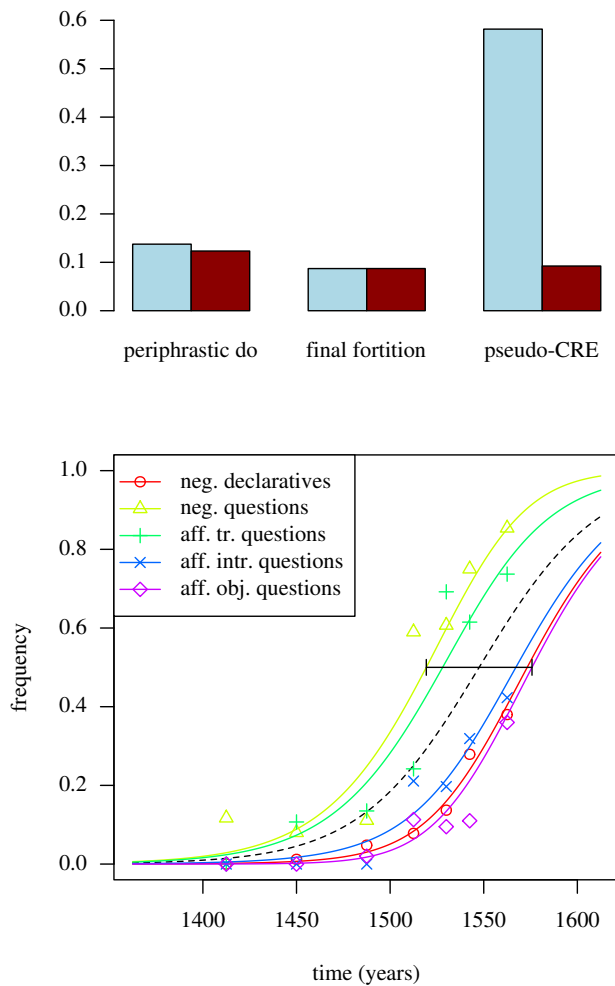
Crucially, however, it is a theorem of the model that the time separation possible between any two contexts of one underlying grammatical change has a finite upper bound which is inversely proportional to the rate of the underlying change. This time separation theorem overcomes problem (2) identified above, and invites us

to reconsider a number of data sets in which CREs have previously been studied using the independent logistics operationalization.

For this purpose, we introduce a novel curve-fitting algorithm based on nonlinear least squares regression (Bates & Watts 1988). We investigate the model in the light of historical data by focussing on a number of changes for which a CRE has previously been established using the method of independent logistics. We show that the fit of our model to these data is no worse than a fit made using the traditional method (Fig. 2, top). Crucially, however, our model implies a maximal time separation for each change, which we also test, finding that the empirically observed time separations fall within the range prescribed by our model (Fig. 2, bottom).

We therefore show that a more constrained, theoretically motivated model of the CRE can fit historical data no worse than a less constrained one, and that it also generates new empirical predictions, also in line with the data, in the form of the time separation theorem. To complement these results, we investigate a number of pseudo-CREs – data sets that appear to exhibit a CRE if probed using the traditional method of independent logistics but that plausibly cannot due to unassailable a priori grounds (see problem (1), above). We show that here, when quantified by the residual error of the regressions, our model gives consistently worse fits than the traditional method, as desired (Fig. 2, top).

Finally, we discuss a number of additional predictions the model makes about change in the presence of contextual biases. In brief, we show that in this extended model Yang’s (2000: 239) Fundamental Theorem of Language Change ceases to hold, so that a distributional difference in the proportion of sentences parsed by two competing grammars is neither a sufficient nor a necessary condition of change on its own: the production biases induce a bifurcation in the parameter space of the model, and whether an innovatory grammatical option overtakes a conventional one comes to depend on a nonlinear interaction of grammar advantages (as defined in Yang 2000) and the magnitude and direction of the production biases. Conducting a full bifurcation analysis of the two-grammar case of the extended model, we work out the exact mathematical form of this dependence, and discuss its implications for population-level modelling of language change.



**Fig. 2.** *Top:* Errors of fits of our model (blue) and the standard model (red) to two CREs, rise of periphrastic *do* in English (Kroch 1989) and loss of final fortition in Early New High German (Fruehwald, Gress-Wright & Wallenberg 2009). *Bottom:* Fit of our model to the data on English *do*-support. The horizontal bar gives the maximal time separation between contexts licensed by the model.

**Syntactic Constraints on Quantifier Domains:  
An Experimental Study of the quantifier *dou* in Mandarin Chinese**

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Which NP does *all* associate with in ‘The pandas, the children have all seen’, *the pandas* or *the children*, or both? Certainly *the children*? The intuition of Mandarin native speakers does not work for a Mandarin counterpart though. We present experimental results on adults’ interpretation of the adverbial universal quantifier *dou* ‘all’ in Mandarin Chinese. This is the first experimental study on syntactic constraints on the quantifier domain of *dou*, although there has been extensive theoretical discussion of its properties. We advance the hypothesis that c-command is the relation computed by speakers in determining which NP *dou* quantifies over (the domain of *dou*), whereas an analysis based on a locality restriction are not operative in the domain we explore, contra previous theoretical proposals.

**Previous analyses and experimental questions:** Cheng (1995) argues that *dou* moves to adjoin to the NP it quantifies over at LF. To explain blocking effects in *dou* quantification, Cheng (1995) applies a Principle of Economy of Derivation (PED) (Chomsky, 1991), taking *dou* to make only the shortest move, attaching to the closest m-commanding NP as its domain. The more distant NP is not available for *dou*. Cheng analyzes left dislocation sentences like (1), where both the topic and subject m-command *dou*. **Cheng’s PED approach predicts that only the subject *women* ‘we’ can be quantified by *dou* because it is closer, thus predicting that only meaning (ii) is possible in (1).** (Cheng takes (1) as ambiguous though, without explaining why *dou* quantification over the further *zhexie xuesheng* ‘these students’ does not violate PED).

- 1) [CP [zhexie xuesheng]<sub>i</sub> Top [ASPP [pro<sub>i</sub> [ASPP women dou xihuan t<sub>i</sub>]]]  
these students we all like

i) “For all of these students, we like them.” ii) “For the students, all of us like them.”

iii) “For all of these students, all of us like them.”

Zhang (1997) analogizes *dou* to an anaphor, and proposes that either one or all of the NPs that asymmetrically c-command *dou* can associate with *dou* by multiple linking. Therefore, **Zhang’s theory predicts a three-ways ambiguity (meaning i, ii and iii)**. Lin (1996, 1998) treats *dou* as a generalized distributive operator. It distributes over a particular element by binding a trace that is left by the element being moved to/through the Spec of a Distributive Phrase headed by *dou*. Therefore **either the trace of the topic** (he assumes topicalization, not left dislocation) **or the trace of the subject** (he adopts the VP-internal subject hypothesis) **but not both simultaneously** can be bound by *dou* predicting either interpretation i or ii. Both Zhang and Lin require *dou* to be c-commanded by its domain.

Considering the distinct predictions of the previous theories, our experimental questions are: which NP(s) will *dou* quantify over when there are two NPs available? Must the domain of *dou* c-command *dou*? However, we suggest that sentences such as (1) *are not the best testing condition*, because both the topic and subject are plural and have a preferred exhaustive interpretation which is not distinguishable from universal force in most cases (e.g. *we left* means *we all left*). In (1), *zhexie xuesheng* ‘these students’ is usually synonymous with “ALL OF these students” even in the absence of the quantifier *dou*. Therefore, *our experiment uses bare nouns* rather than plurals or demonstrative phrases, because bare nouns in Mandarin are ambiguous between a singular and a plural interpretation without additional context. Crucially, when a bare noun is quantified by *dou*, an obligatory exhaustive (hence plural) interpretation is obtained. We use this interpretation as a diagnosis for *dou* quantification over bare nouns.

**Experiment:** 40 native speakers of Mandarin Chinese (mean age 22.9) were recruited in Beijing, China. We used a Truth Value Judgment Task (Crain & Thornton, 1998), in which the experimenter told the subject a series of stories (contexts), acted out with pictures and toys. The experimenter then uttered a description of the story (the test sentence), asking the subject to judge if it was true or false and to explain why. This experiment contained 6 conditions, three sentence types (ST) and two types of contexts/stories (CT) ( $3 \times 2$ ). Due to space limitation we discuss only materials of the first 4 conditions, from 2 STs (examples in (2)-(3)). STs in (2) differed regarding the c-command relation between the NPs and *dou*. For CT1 and CT2 in (3), only one of the two NPs, either NP1 or NP2, could be felicitously quantified by *dou*, thus must be interpreted as plural/exhaustive, and the other NP required a singular interpretation. The experiment normally lasted approximately one hour. The following are typical examples of test sentences with their contexts ( $2 \times 2$ ). In the actual test, the stories and characters were systematically varied. Notice that in the experiment, we tried to keep the two NPs equally salient in the context, *e.g.* by balancing the occurrences of the two NPs.

- (2) a. ST 1: [[Xiongmao]<sub>NP1</sub> [dou wei-le [tuzi]<sub>NP2</sub>]]. (NP1, but not NP2, c-commands *dou*)  
           panda                   all feed-ASP rabbit  
       i. ‘One and only one rabbit was fed by all of the pandas.’ (T in CT1; F in CT2)  
       ii. or ‘One and only one panda fed all of the rabbits.’ (T in CT2; F in CT1)  
       b. ST 2: [[Tuzi]<sub>NP2</sub>, [[xiongmao]<sub>NP1</sub> dou wei-le]]. (both NP1 and NP2 c-command *dou*)  
           rabbit,   panda   all feed-ASP  
       i. ‘One and only one rabbit was fed by all of the pandas.’ (T in CT1; F in CT2)  
       ii. or ‘One and only one panda fed all of the rabbits.’ (T in CT2; F in CT1)
- (3) a. CT 1: One and only one of the two rabbits was fed by both pandas.  
       b. CT2: One and only one of the two pandas fed both rabbits.

**Results and Discussion:** As shown in Table 1, for ST1 in CT1 and CT2 (Condition ST1\_CT1 and ST1\_CT2 respectively), participants accepted a singular (non-exhaustive) interpretation of the object NP1 in ST1\_CT1 (2ai) but rejected the singular interpretation of the subject in ST1\_CT2 (2aii). This indicates that only the subject NP1, which c-commands *dou*, can be *dou*’s domain, whereas the object NP2 which does not c-command *dou*, cannot. For ST2 conditions, the participants accepted either the topic (ST2\_CT2, 2bii) or the subject (ST2\_CT1, 2bi) as the domain of *dou*, although they clearly prefer the (non-local) topic as the domain.

<b>Table 1: Acceptance rate of test sentences under two context types</b>				
<b>Conditions</b>	ST1_CT1 (sd)	ST1_CT2 (sd)	ST2_CT1 (sd)	ST2_CT2 (sd)
<b>Accept. rate</b>	<b>94.9% (1.97)</b>	0.9% (0.84)	26.7% (3.96)	<b>85.8% (3.12)</b>

Our results suggest that *dou* can quantify over either NP in the topic sentences (ST2 conditions), with a strong preference for the non-local domain, the topic, thus not supporting Cheng’s PED account of *dou*-quantification. Cheng’s analysis predicts that in such sentences, *dou* quantifies over only the closest NP, i.e. the subject. The results also do not support the argument that both of the NPs are quantified by *dou* at the same time, failing to corroborate Zhang’s (1997) approach. Both NPs being quantified means ‘all the pandas fed all the rabbits’: both NPs must be interpreted as exhaustive and therefore at least some subjects would have overwhelmingly rejected ST2 under both CTs. But further results reveal that no participants rejected both. In addition, the contrast between the results of ST1 conditions indicate that only the NP which c-commands *dou*, i.e. the subject, and not the object, can be the domain of *dou*. In sum, given these experimental results, if there are multiple NPs c-commanding *dou*, either one of them, but not both simultaneously, can be *dou*’s domain, compatible with Lin’s (1996, 1998) theory.

## Case does not constrain A-movement: Superraising in Hindi-Urdu

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Case has traditionally played a major role in constraining syntactic operations, both by requiring DPs to be case-licensed (Chomsky 1980), and by rendering DPs with a valued case feature invisible to A-operations (Chomsky 2000). On the other hand, a significant body of literature has argued that case does not affect processes of narrow syntax (e.g., Marantz 1991, McFadden 2004, Bobaljik 2008). This paper elucidates the role of case in the syntax of superraising. Based on novel evidence from Hindi-Urdu (HU), it shows that A-movement is not constrained by case.

**Background:** Superraising refers to the illicit movement of an element from Spec,CP to Spec,TP (\**Sue seems (that) t likes carrots*). Recent **case-based approaches** attribute this impossibility to the case properties of the moving element. Chomsky's (2000) *Activity Condition* regulates that a case-bearing DP is invisible to A-processes (also Obata & Epstein 2011). Because CPs are case-complete in English, elements in Spec,CP will always bear case and hence not be able to A-move to Spec,TP. This line of account contrasts with traditional **position-based approaches**, which state the restriction in terms of the positions involved in movement chains: Movement from an  $\bar{A}$ -position to an A-position is ruled out (the *Ban on Improper Movement*; see Chomsky 1981, Müller & Sternefeld 1993, Williams 2003, Abels 2007, among many).

**Claim:** A- and  $\bar{A}$ -movement in HU have locality constraints identical to their English counterparts, but their distribution crucially cannot follow from case assignment. This remains unaccounted for on case-based approaches to superraising. I will first motivate the core properties of A/ $\bar{A}$ -movement in HU and then show that case does not capture their distribution.

**A- vs.  $\bar{A}$ -movement in HU:** The A/ $\bar{A}$ -situation in HU is strikingly similar to English: (i)  $\bar{A}$ -movement, but not A-movement, is subject to weak crossover (Mahajan 1990). (ii) A-movement is impossible out of finite clauses (Mahajan 1990), but possible out of nonfinite clauses (Keine 2013). (iii)  $\bar{A}$ -movement lands in CP. (iv) A-movement lands lower than CP. Point (iii) is obscured by HU's very flexible word order. Evidence supporting it comes from the paradigm in (1). There a finite clause is embedded inside a nonfinite clause, which is itself embedded inside a finite matrix clause. Movement out of the innermost finite clause cannot land inside the nonfinite clause (1b), but can target the finite clause (1c). Because the nonfinite clause is extraposed in (1), and only verbal elements can be rightward moved in HU (Bhatt & Dayal 2007), it is clear that *kitaab* must target a position inside the intermediate nonfinite clause in (1b).

- (1) a. *Base configuration:*  $\checkmark$  [matrix clause [nonfinite clause [finite clause DP ]]]  
 Māĩ caahtaa hũ: [kah-naa [ki māj-ne **kitaab** parh l-ii hai ]].  
 I want be.1SG say-INF that I-ERG book read take-PRFV is  
 'I want to say that I read the book.'
- b. *No  $\bar{A}$ -mvt into nonfinite clauses:* \* [matrix clause [nonfinite clause DP [finite clause *t* ]]]  
 \*Māĩ caahtaa hũ: [**kitaab**<sub>1</sub> kah-naa [ki māj-ne *t*<sub>1</sub> parh l-ii hai ]].  
 I want be.1SG book say-INF that I-ERG read take-PRFV be
- c.  *$\bar{A}$ -mvt into finite clauses:*  $\checkmark$  [matrix clause DP [nonfinite clause [finite clause *t* ]]]  
**Kitaab**<sub>1</sub> māj caahtaa hũ: [kah-naa [ki māj-ne *t*<sub>1</sub> parh l-ii hai ]].  
 book I want be.1SG say-INF that I-ERG read take-PRFV be

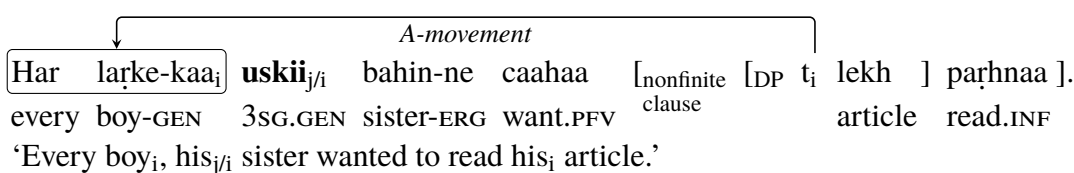
Independent evidence indicates that nonfinite clauses in HU lack a CP layer, unlike finite clauses: Nonfinite clauses can never contain the complementizer *ki*, and they can never provide interrogative force (Dayal 1996), both unlike finite clauses. The impossibility of  $\bar{A}$ -movement to land in a nonfinite clause (1) then follows if  $\bar{A}$ -movement targets Spec,CP. Point (iv) is illustrated in (2), where *har kuttaa* is A-moved within the nonfinite clause (the nonfinite clause is again extraposed to ensure that *har kuttaa* does not leave it). Because nonfinite clauses lack a CP but allow A-movement inside them, A-movement must land in a lower position (e.g., Spec,TP).

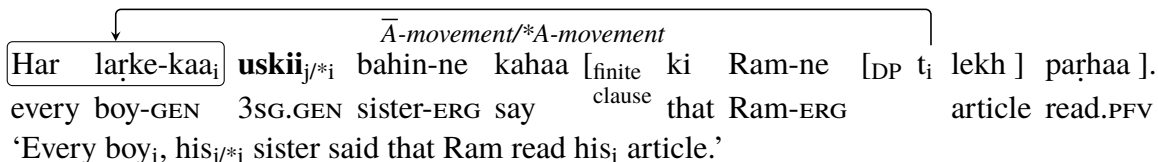
(2) *A-movement within nonfinite clause*

Ram-ne caahaa [har kuttāa<sub>1</sub> us-ke<sub>1</sub> baccō-ko t<sub>1</sub> dikhaanaa ].  
 Ram-ERG want every dog its owner-DAT show  
 ‘Ram wanted to show every dog *x* to *x*’s owner.’

In sum, A- and  $\bar{A}$ -movement in HU have the same interpretive, locality, and landing site properties as their English equivalents. To rule out A-extraction out of a finite clause,  $\bar{A}$ -movement to Spec,CP followed by A-movement into the higher clause (i.e., improper movement) must be prevented, just like in English. Unlike in English, case does not accomplish this in HU.

**Case and movement:** Possessors in HU can be A- and  $\bar{A}$ -extracted out of their host DP. A-extraction of a possessor out of a nonfinite clause is shown in (3). As (4) demonstrates, analogous movement out of a finite clause can only be  $\bar{A}$ -movement, as it is subject to weak crossover.

- (3)  [Har larke-kaa<sub>i</sub> uskii<sub>j/i</sub> bahin-ne caahaa [nonfinite [DP t<sub>i</sub> lekh ] parhnaa ].  
 every boy-GEN 3SG.GEN sister-ERG want.PFV clause article read.INF  
 ‘Every boy<sub>i</sub>, his<sub>j/i</sub> sister wanted to read his<sub>i</sub> article.’

- (4)  [Har larke-kaa<sub>i</sub> uskii<sub>j/\*i</sub> bahin-ne kahaa [finite ki Ram-ne [DP t<sub>i</sub> lekh ] parhaa ].  
 every boy-GEN 3SG.GEN sister-ERG say clause that Ram-ERG article read.PFV  
 ‘Every boy<sub>i</sub>, his<sub>j/\*i</sub> sister said that Ram read his<sub>i</sub> article.’

Crucially, case connectivity effects show that the genitive case of the moving possessor in (3–4) must be assigned within its host DP, as the case of an A-/ $\bar{A}$ -moved element must match the case it receives in its base position. Thus, movement of, e.g., a direct object cannot lead to genitive case assignment in the landing site. Consequently, the genitive case of *har larke-kaa* must be assigned before *har larke-kaa* vacates its container DP.

**Consequences for case-based approaches:** The gist of case-based approaches is that nominals can undergo A-movement *iff* they bear an unvalued case feature. This is not the case in HU: Because possessors receive their case inside their host DPs, a case-based approach incorrectly predicts A-movement out of the host DP to be ruled out. The HU facts are also beyond Obata & Epstein’s (2011) parametrization of the case-based approach, according to which in some languages a DP can remain visible to the A-system even after it has received case. This would wrongly predict that A-movement in Hindi should be possible not only out of DPs, but also out of finite clauses. Thus, case fails to successfully predict the distribution of A-movement in HU.

**Consequences for position-based approaches:** Unlike case-based approaches, a position-based approach to English extends without further ado to the HU facts, precisely because the positional distribution of A-movement is identical in the two languages. Williams (2013) proposes (5), which is itself derived from his *Level Embedding Conjecture*. A-movement from Spec,CP to Spec,TP would violate (5) because TP occupies a lower position in the clausal structure than CP ( $C > T > \dots$ ). As (5) holds for all elements irrespective of their featural properties, *all* DPs are prohibited from undergoing such movement irrespective of case.

- (5) Given a Pollock/Cinque-style clausal structure  $X_1 > \dots > X_n$  (where  $X_i$  takes  $X_{i+1}P$  as its complement), a movement operation that spans a matrix clause and an embedded clause cannot move an element from  $X_j$  in the embedded clause to  $X_i$  in the matrix, where  $X_j > X_i$ . Other position-based accounts (Chomsky 1981, Müller & Sternefeld 1993, Abels 2007) achieve the same result. Moreover, because a position-based account derives the distribution of A-movement in both Hindi and English, a case-based account for English is redundant. Thus, case does not play a designated role in constraining the distribution of A-movement. This conclusion dovetails with recent efforts to remove case-based constraints from narrow syntax.

### It's tough to reconstruct

**Background:** One of the most striking properties of *tough*-constructions (TCs) is that scope reconstruction of the matrix subject into the embedded gap position is impossible, unlike raising-to-subject constructions (Postal 1974, Epstein 1989, Hartman 2012, Fleisher 2013):

- (1) a. **Few people** are easy to talk to \_\_\_\_ . ≠ It is easy to talk to **few people**.  
b. **Someone** is easy to talk to \_\_\_\_ . ≠ It is easy to talk to **someone**.

However, Longenbaugh (2015) discovers instances of TCs with comparative quantifiers (e.g. *more than*, *less than*) that prima facie appear to require precisely this reconstruction and hence constitute potential counterexamples to the lack of reconstruction in TCs:

- (2) a. It is easy to talk to **fewer than three professors** (at once).  
b. **Fewer than three professors** are easy to talk to \_\_\_\_ (at once).

One interpretation of (2b) is that for any group of professors whose cardinality is less than three, it is easy to talk to that group; this nonspecific reading is superficially similar to the corresponding expletive construction in (2a). Thus, Longenbaugh (2015) argues that this reading is obtained by reconstructing *fewer than three professors* into the infinitival clause. If correct, (2b) would provide a powerful argument for a movement account of TCs.

**Claim:** We argue that despite initial appearances, comparative quantifiers do *not* and *cannot* reconstruct in TCs. In particular, we argue that specificity does not diagnose reconstruction of a comparative quantifier and that the true reconstructed reading is unavailable. We show that these facts follow straightforwardly from Hackl's (2001) analysis of comparative quantifiers and a base-generation analysis of TCs.

**Specific vs. nonspecific:** First, we observe that the specific–nonspecific contrast that examples such as (2) rely on is in fact a general property of comparative quantifiers:

- (3) Last year, **fewer than five people** fit in my old car when we went on vacation.  
(3) has both a specific and nonspecific interpretation with respect to individuals, despite having no modal operator that the comparative quantifier could scope below. Thus, the nonspecific interpretation of (2b) is not due to reconstruction, but a general property of comparative quantifiers.

**Diagnosing reconstruction:** The true reconstructed reading of sentences like (2b) would involve interpreting the modified numeral below the scope of the *tough*-predicate. To illustrate this type of scope ambiguity, consider the sentence in (4).

- (4) John is required to read **fewer than six books**.  
a. *Upper-bound:* John isn't allowed to read more than 5 books. (require >> <6)  
b. *Minimality:* (<6 >> require)

The minimal number of books that John is required to read is less than 6.

(4) has two readings: The first states that there is an upper bound on the number of books that John can read (4a). The second states that there is some minimal number of books that John is required to read (4b). The upper-bound reading is obtained by *require* scoping above the comparative quantifier. The minimality reading is obtained by *require* scoping below the comparative quantifier. In a TC, true reconstruction would yield an interpretation equivalent to the upper-bound reading of (4). Against this backdrop, consider the scenario in (5), where the only felicitous interpretation in consoling Jane would be the upper-bound reading.

- (5) *Context:* Jane is worried about a test that she has to take. If she makes fewer than 10 mistakes on the test, she will pass; otherwise she will fail. Mary wants to console Jane by saying that it is fairly easy to make fewer than 10 mistakes on this test.  
a. It is easy to make **fewer than 10 mistakes** on this test.  
b. **Fewer than 10 mistakes** are easy to make \_\_\_\_ on this test.

The expletive construction in (5a) is a consoling response because it expresses an upper bound on the number of mistakes that are easy to make on the test. However, the TC in (5b) is infelicitous in the context because the only available interpretation is the surface-scope reading, which is the minimality reading, where there is some number of mistakes such that it is easy to make that number of mistakes on the test. If reconstruction were possible in a TC, an upper-bound interpretation would be available in (5b), contrary to fact. We therefore conclude that reconstruction of a comparative quantifier is impossible in a TC.

**Proposal:** We propose that the available interpretations of (5a) and (5b) result from the interplay of the semantics of TCs and comparative quantifiers. We adopt here the standard semantics for comparative quantifiers from Hackl (2001) and Nouwen (2010): (i) Comparative quantifiers are interpreted as degree constructions following Heim (2000) (6). (ii) Argument DPs containing a number always contain a silent counting quantifier *many* (7). (iii) Comparative quantifiers undergo QR, leaving behind a degree trace and forming a property of degrees (8).

- (6) a.  $\llbracket \text{more than } 3 \rrbracket = \lambda M_{dt}. \max_n (M(n)) > 3$   
 b.  $\llbracket \text{less than } 3 \rrbracket = \lambda M_{dt}. \max_n (M(n)) < 3$
- (7)  $\llbracket \text{many} \rrbracket = \lambda n \lambda P_{\langle e, st \rangle} \lambda Q_{\langle e, st \rangle} \lambda w. \exists x [|x| = n \wedge P(x)(w) \wedge Q(x)(w)]$
- (8)  $\llbracket \text{fewer than } N \rrbracket \lambda n \llbracket \text{John read } [n\text{-many books}] \rrbracket$   
 $\uparrow$

For TCs, we adopt the semantics of Keine & Poole (2015), who assume a base-generation account à la Chomsky (1973). In a TC, a null operator  $\bar{A}$ -moves from the gap position to the edge of the embedded clause, yielding a property of individuals. When the embedded clause composes with the *tough*-predicate, it likewise yields a property of individuals (9b). This constituent then composes with the base-generated matrix subject (9c). In an expletive construction, the *tough*-predicate composes directly with the embedded clause, which denotes a proposition. For readability, we omit the degree and judge semantics of Keine & Poole (2015).

- (9) a.  $\llbracket \text{easy} \rrbracket = \lambda Q_{\langle e, st \rangle} \lambda x \lambda w. \forall w' \in \text{ACC}_w [\text{EASY}_{w'}(Q(x)(w'))]$   
 b.  $\llbracket \text{easy to talk to} \rrbracket = \lambda x \lambda w. \forall w' \in \text{ACC}_w. [\text{EASY}_{w'}(\text{TALK-TO}(x)(w'))]$   
 c.  $\llbracket \text{John is easy to talk to} \rrbracket = \lambda w. \forall w' \in \text{ACC}_w. [\text{EASY}_{w'}(\text{TALK-TO}(\text{John})(w'))]$

With this semantics, (5a) and (5b) have the LFs and denotations in (10) and (11) respectively.

- (10) a. *LF for (5a):*  $\llbracket \text{It is easy } [ \llbracket \text{fewer than } 10 \rrbracket \lambda n \llbracket \text{to make } [n\text{-many mistakes}] \rrbracket ] \rrbracket$   
 b.  $\forall w' \in \text{ACC}_w [\text{EASY}_{w'}(\max_n (\exists x [|x| = n \wedge \text{MISTAKE}(x)(w') \wedge \text{MAKE}(x)(w')]) < 10)]$
- (11) a. *LF for (5b):*  $\llbracket \llbracket \text{fewer than } 10 \rrbracket \lambda n \llbracket [n\text{-many mistakes}] \text{ are easy } \lambda x \llbracket \text{to make } x \rrbracket \rrbracket$   
 b.  $\max_n (\exists x [|x| = n \wedge \text{MISTAKE}(x)(w) \wedge \forall w' \in \text{ACC}_w [\text{EASY}_{w'}(\text{MAKE}(x)(w'))]]) < 10$

Consequently, in the expletive construction, the *tough*-predicate obligatorily scopes over the comparative quantifier, while in the TC, it obligatorily scopes below the comparative quantifier. This yields only an upper-bound reading in the expletive construction and a minimality reading in the TC. Thus, the only interpretation available to a TC is with the comparative quantifier outscoping the *tough*-predicate. This accounts for the infelicity of the sentence in (5b), and, moreover, it extends to the original example in (2b).

**Conclusion:** At first glance, (2) provides strong evidence for reconstruction in TCs. We have argued that this evidence is only apparent. Instead, the impression of reconstruction results from the interaction of the semantics of comparative quantifiers with that of *tough*-constructions. Moreover, not only is reconstruction unnecessary to obtain the desired reading, reconstruction must in fact be blocked altogether to prevent overgeneration of readings. This result further supports the conclusion that scope reconstruction is altogether impossible in *tough*-constructions. Finally, these conclusions follow naturally from a base-generation account (Chomsky 1973).

## Imperatives Above and Below Conjunction

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Imperative-and-Declarative conjunctions (**IaDs**, Schwager/Kaufmann 2005, 2012) are coordinations with morphologically imperative first clauses (see Jespersen 1924). They feature conditional meanings, as shown in (1), examples from von Fintel & Iatridou (2009, 2015):

- (1) a. Study hard and you'll pass the class. (= if you study hard, you'll pass)
- b. Ignore your homework and you'll fail the class. (= if you ignore it, you'll fail)

Most researchers since Clark (1993) have distinguished IaDs that describe situations **desirable** for the speaker and/or hearer like (1a) from IaDs describing **undesirable** situations like (1b). Others (Han 2000, von Fintel & Iatridou) have proposed one unified category for all IaDs. Neither camp maintains the full force of the imperative speech act in all IaDs, especially in undesirable ones.

In this paper, we present evidence that all IaDs indeed contain full imperative speech acts, which we represent via an operator **IMP** in C (cf. Han, Kaufmann, i.a.). We propose a split in IaDs, but one quite different from previous accounts. In our first category, **Narrow-scope IaDs (NaIaDs)**, IMP scopes low, creating a fully imperative first clause that conjoins at the CP level with a declarative. Any conditional meaning in NaIaDs arises from modal subordination (Han, Roberts 1989). Our second category, **Trans-clausal IaDs (TrIaDs)**, patterns with so-called conditional conjunctions (Culicover & Jackendoff 1997, Russell 2007, Keshet 2012): IMP scopes above a coordination of TPs, agreeing morphologically (only) with the first clause. To the extent that we correctly explain IaDs, our proposal is evidence that an element like IMP appears in the syntax of all imperatives (pace Porter 2007, Zanuttini et al. 2013). Consider the following tests for our two categories:

### (2) **NaIaDs**      Syntax: [<sub>CP</sub> IMP TP] and [<sub>CP</sub> ... ]

- (a) CAN ALWAYS be paraphrased as two sentences without 'and':  
*Study hard! You'll (easily) pass the class.*
- (b) CANNOT therefore include (unlicensed) NPIs in their first clauses:  
*Do somebody/#anybody please confess, and we can all go home.*
- (c) CAN be of the form 'do (negation) subject VP':  
*Don't everybody talk at once, and maybe I'll be able to understand you.*
- (d) CAN be concessive / be conjoined with 'but':  
*Fine! Come closer, but I am going to shoot you.*

### (3) **TrIaDs**      Syntax: [<sub>CP</sub> IMP [<sub>TP</sub> ... ] and [<sub>TP</sub> ... ]]

- (a) CAN include imperatives that sound odd unconjoined (Han 2000):  
*Doubt that you'll succeed and you won't.* vs. *#Doubt that you'll succeed! You won't.*
- (b) CAN include (apparently) unlicensed NPIs (Bolinger 1967, Davies 1986, Han 2000):  
*Come any closer and I'll shoot.* vs. *#Come any closer!*
- (c) CANNOT be of the form 'do (negation) subject VP':  
*#Do anybody take even one more step, and I'll shoot.*
- (d) CANNOT be concessive / be conjoined with 'but':  
*Fine! #Come any closer, but I am going to shoot you.*

We propose that the scope of IMP explains these differences. NaIaDs must include imperatives that can stand alone since their first conjunct is a complete imperative, as marked by the low-scoping IMP operator. The first clause of a TrIaD is more flexible since, as we will see below, the imperative

meaning arises from the entire conjunction, not just the first clause. Second, the ability of a TrIaD to contain an NPI follows from it being a conditional conjunction (as argued by von Fintel & Iatridou 2015), which also allow such NPIs: *You come any closer, and I'll shoot*. CP conjunctions like NaIaDs cannot be conditional conjunctions (see Culicover & Jackendoff 1997) and therefore do not allow NPIs. Third, following Potsdam (2007), we take the form 'do (negation) subject VP' to involve T-to-C movement of *do*. Such movement, we claim, is not allowed from within the TP conjunction of a TrIaD, due to the coordinate structure constraint (Ross 1967). Finally, we assume that concessives require conjunction at the CP level and leave the explanation for this to future work.

[As an aside, neutral IaDs (neither desirable nor undesirable) like Clark's *Open the Guardian, and you'll find three misprints on every page*, pattern with non-conditionals: *Do everyone open the Guardian (next time you see one), and (I guarantee) you'll find three misprints on every page.*]

Semantically, we propose IMP is a modal that imposes certain pragmatic constraints on its TP complement, thus generating an imperative speech act (Kaufmann 2012). As a modal, IMP can induce a conditional meaning, e.g. in the second clause of a NaIaD, via modal subordination. For instance, compare (4a) to an explicit modal conjunction like (4b) (pace von Fintel & Iatridou, whose counterexamples to modal subordination are most easily understood as TrIaDs rather than NaIaDs):

- (4) a. Do everybody come over to my place, and we'll have a great time.
- b.  $\approx$  Everybody should come over to my place, and we'll have a great time.

As for TrIaDs, we believe we are the first to propose that all IaDs (even undesirable ones) involve true imperative speech acts. We make this claim based on new empirical data: IaDs that don't even indirectly imply a possible course of action are ruled out. For instance, the acceptability differences in (5a) and (5b) hinge on the fact that while it is impossible to control whether you are on a security tape recorded earlier or whether you are (currently) old enough to drink, you can control whether you show up on a future security tape or whether you wait until you are old enough to drink:

- (5) a. Be on (✓ tonight's / #last night's) security tape, and they'll arrest you.
- b. Be old enough to drink (#tonight / ✓ when you come back), and you can try the wine.

To explain the semantics of TrIaDs, we adopt Keshet's (2012) proposal that first conjuncts in conditional conjunctions act like conditional antecedents by joining the restriction of a higher modal (here, IMP). We next propose extending imperative speech acts to include **indirect imperatives**, parallel to indirect answers to questions (Groenendijk & Stokhof 1984). For instance, *Be late and you're fired*, along with the contextual knowledge that the listener wants their job, implies that the listener should arrive on time. In simple imperatives, only priority modals (deontic, bouletic, etc) are available flavors for the modal IMP; since a priority modal can always be construed as a direct imperative, this blocks the less salient indirect imperative reading. Independently, though, we know that conditionals (including conditional conjunctions) license different modal flavors from simple declaratives and imperatives, such as the **future** modal as in (6b). The IMP in TrIaDs are thus freed from necessarily using a priority modal, and therefore may indirectly indicate a course of action.

- (6) a. You are grounded.  $\neq$  You will be grounded.
- b. If you're late, you are grounded. = If you're late, you will be grounded.

## Two structural sources for possessives:

### Evidence from Spanish alienable possessive constructions

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**Some data.** Spanish sentential adverbs do not modify PreN(ominal)-Poss(essives) alone in cases like (1a), but they have the whole DP in their scope. Regarding PostN-Poss as in (1b), their behavior varies: evidential adverbs (*evidently*) and evaluative adverbs (*regrettably*) can only modify them, while speech act adverbs (*honestly*) cannot. These contrasts are unexpected from the standard view that both PreN- and PostN-Poss are merged at a unique position in DPs (Cardinaletti 1998; Alexiadou *et al.* 2007). Arguably, they arise in different positions, PostN-Poss originating in a DP-internally merged sentential domain from which they modify the noun; structural implications therein result in (un)grammaticality in (1b):

- (1) a. {Evidentemente/Lamentablemente/Honestamente}, sus errores.  
evidently/regrettably/honestly his faults  
b. Errores, {evidentemente/lamentablemente/\*honestamente}, suyos.  
faults evidently/regrettably/honestly his

**Goal.** I show that Spanish PreN- and PostN-Poss are each introduced into alienable possessive constructions by different merge positions (inalienable ones need a particular study due to their nominal argument structure). The discussion is made in parallel with a new proposal on the DP structure: all determiners, including definite articles, are merged in embedded layers in DPs. I also argue that syntax-driven phonetic restrictions can avoid imposing an undesirable look-ahead requirement on the grammar in deriving DP constructions.

**DP-internally merged articles.** The definite article projects its own projection ArtP inside DPs, and hosts demonstratives in its specifier (Julien 2002; Roehrs 2006). I claim that ArtP is located between the two domains argued for as merge positions of adjectives in Cinque (2010): Dir(ect)-Mod(ification) APs occur as specifiers of dedicated functional heads of the extended projections of N. Indir(ect)-Mod APs are predicates in nonfinite reduced relative clauses, merged above the functional projections hosting Dir-Mod APs:

- (2) [DP [FP [CP [TP PRO<sub>i</sub> T [*Indir-Mod AP*]]] F [ArtP<sub>i</sub> [FP [*Dir-Mod AP*] F [NP]]]]]

D has an unspecified [DEF] feature and EPP. Hence, ArtP is attracted to SpecDP by Agree between D and Art. The subject PRO of Indir-Mod APs is coindexed with ArtP (cf. Cinque 2010). Empirical evidence in favor of this proposal is provided by the fact that direct and indirect modifiers show different modification ranges on the elements within ArtP, despite the identical position they eventually occupy:

- (3) a. esta empresa cervecera                      b. esta empresa vendida  
this company of-beer                              this company sold

Classificatory adjectives like *cervecera* are always direct modifiers, and participle adjectives such as *vendida*, as indicated by the past participle suffix *-da*, are inherently indirect modifiers (Cinque 2010). Thus, *cervecera*, merged below ArtP, only modifies the noun in (3a) (an intersective reading between the referent of *esta empresa* and the set denoted by *cervecera* cannot be processed). Meanwhile, in (3b), the entire set of demonstrative and noun remains within the scope of *vendida*, merged above ArtP, (the satisfactory paraphrase is *this company, which was sold*, not *a sold company, which is this one*)

**Duplicity in possessive merger.** I claim that, in principle, Romance PreN-Poss enter DPs as the highest Dir-Mod adjective, but immediately below ArtP (SpecXP). As a result, they are indifferent to (in-)definiteness of the DP in which they appear, and precede very high Dir-Mod adjectives like *alleged* (It. *il/questo/un (suo) sedicente (\*suo) psichiatra* ‘the/this/a (his) alleged psychiatrist’). Their rendering indefinite DPs specific, a function proper to Dir-Mod adjectives (Bosque 1996), shows that they belong to this type of adjectives (hence, not to Indir-Mod adjectives nor to pronouns). Accordingly, relative clauses with verbs in the subjunctive mood are not permitted in this kind of DPs:

- (4) \*Intento localitzar un meu amic que m'ajudi. (Catalan)  
 try.1SG locate a my friend that me help.3SG.SUBJ

(Expected meaning: 'I am trying to find any friend of mine that may help me.')

This account also holds for Old Spanish, where PreN-Poss behaved in the same way as current Italian or Catalan counterparts. Though, the standard contemporary Spanish PreN-Poss act as definite determiners after undergoing reanalysis (*(\*el/\*un) mi libro* '(the/a) my book'). The proposal in (2) casts light on the role of locality in this diachronic change: [+DEF] on Art spreads toward the contiguous PreN-Poss in SpecXP, which absorb it to be reestablished as SpecArtP, preserving their maximal projection status as an instance of adjectival determiners in terms of Börjars (1998). Then, I argue that PostN-Poss are Indir-Mod adjectives. This analysis explains the contrast in (1b). Evidential and evaluative adverbs modify PostN-Poss if they occur in higher positions in the same relative clause with them. However, speech act adverbs, only licensed in matrix clauses, cannot appear in this environment (Haegeman 2003). Concretely, PostN-Poss occupy the highest position among Indir-Mod adjectives, thus, below heterogeneous indirect modifiers such as participle adjectives and finite restrictive relative clauses, according to Cinque's (2010) hierarchy. Now, the description that they must follow other adjectives, but precede participle adjectives and relative clauses meets a structural reason. For example, (5a) derives from (5b), namely, ArtP moves around the nearest modifier, and then continues to move pied-piping the immediately dominating phrase around the next nearest modifier. This movement is repeated all the way up to SpecDP.

- (5) a. la casa nueva suya pinta-da de azul que vi ayer  
 the house new his paint-ed of blue REL saw.1SG yesterday  
 b. [DP [*que vi ayer* [*pintada de azul* [*suya* [*nueva* [ArtP *la* [NP *casa*]]]]]]]

**Silence of Art.** Spanish PostN (but not PreN) demonstratives can appear with definite articles. The minimal pair in (6a, b) is generally assumed to involve two different Lexical Arrays regarding the inclusion of the article (Brugè 1996). This view, though, may not be too attractive, as it implies that grammar foresees the position that demonstratives will occupy at the syntax in order to determine whether extract the article from the Lexicon.

- (6) a. ese libro b. el libro ese c. [DP ... [ArtP [*ese*] *el* [NP *libro*]]]  
 that book the book that

As an alternative, I propose that they both are derived from (6c), and that the article is not pronounced, if an element with the same [+DEF] feature c-commands it from its specifier (Leu 2008). If ArtP moves to SpecDP, we get (6a); the article, c-commanded by the demonstrative, remains silent. As for (6b), Spanish DPs with PostN demonstratives always have a referential-deictic reading (DPs with PreN demonstratives can have an unspecific/generic reading). I argue that this reading is licensed at the left periphery above DPs, slightly modifying Panagiotidis (2000). Contrastive focus reading or speaker's negative viewpoints on the referent also conveyable by these demonstratives reinforce my proposal. In (6b), the derivation continues after ArtP moves to SpecDP: C<sub>1</sub> licensing the deictic reading is merged with DP, and the demonstrative is attracted to SpecCP<sub>1</sub>; then, C<sub>2</sub> is merged and attracts the remnant to SpecCP<sub>2</sub> à la Kayne. Now that the demonstrative is not in SpecArtP, the article is pronounced.

- (7) a. ese libro suyo b. el libro suyo ese c. \*su libro ese  
 that book his the book his that his book that  
 d. [DP ... [FP [CP [TP PRO<sub>i</sub> T *suyo*]]] F [ArtP<sub>i</sub> [*ese*] *el* [NP *libro*]]]

The more complex pair (7a, b) shares (7d) in the same manner. If ArtP moves around *suyo*, and the entire chunk moves to SpecDP, we get (7a). If a deixis-inducing C<sub>1</sub> head is subsequently merged attracting the demonstrative and a higher C<sub>2</sub> attracting the remnant, we get (7b). (7c), another minimal pair with (6b), is ruled out. The reason is that PreN-Poss and demonstratives compete for SpecArtP to be merged in. In this way, it is unnecessary to stipulate special features or operations to explain these strings, as occasionally done in the literature.

# On replication and polarity in Gã

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In this paper, I provide a detailed description of the facts about negative polarity items (NPIs) which are derived by reduplicating indefinite DPs in Gã (Niger-Congo: Ghana), and propose two ways of dealing with it. One way is to explain it in terms of polarity feature checking. The alternative approach adapts a NEG-Raising analysis of NPIs to Gã.

Reduplicating indefinite DPs to form NPIs is a productive morpho-semantic process in Gã. In (1) for instance, such NPIs, similar to the *any* series in English, are derived by totally reduplicating indefinite DPs that are headed by the D head *ko* which has taken various generic meaning N heads i.e. person, thing, place, time, day, as complements.

(1)

INDEF DP		NPI	
a. mɔ ko	‘a person/someone’	<b>mɔko-mɔko</b>	‘anybody/ nobody’
b. nɔ ko	‘a thing/ something’	<b>nɔko-nɔko</b>	‘anything/ nothing’
c. hé kó	‘a place/ somewhere’	<b>hékó-hékó</b>	‘anywhere/ nowhere’
d. bee ko	‘a time/ sometime’	<b>beeko-beeko</b>	‘anytime/ notime’
e. gbi ko	‘a day/ someday’	<b>gbiko-gbiko</b>	‘anyday/ noday’

Interestingly, all other NPs even with specific meaning N heads which can occur as complements of *ko* can participate in this derivational process, as (2a-b) show. It is significant to note that what is reduplicated is an XP, a phenomenon which may be described as ‘syntactic copying’ (Kimper 2008). Thus in (2c), the N head is modified by an adjective *agbo* ‘big’, and the reduplication affects the entire DP (copying only a part is not allowed). (2d) shows that definite DPs do not permit this NPI formation strategy, and when *ko* selects a plural NP complement (in which case it agrees with the noun in number), the NPI formation process is again blocked (2e). The latter situation may be attributable to the presence of the plural marker, given that many languages form their NPIs with an indefinite DP headed by a form related to the numeral one. Here, it is insightful to note that the form *ko* may be morphologically related to how Gã expresses the numeral ‘one’ i.e. *e – ko*.

(2)

INDEF DP		NPI	
a. shía ko	‘a house’	<b>shía ko-shia ko</b>	‘no house’
b. dátrefónyo ko	‘a doctor’	<b>dátrefónyo ko-dátrefónyo ko</b>	‘no doctor’
c. shía agbo ko	‘a big house’	<b>shía agbo ko-shía agbo ko</b>	‘no big house’
d. shía le	‘the house’	<b>*shía-le-shia-le</b>	
e. shía-i ko-mɛi	‘some houses’	<b>*shíai komɛi-shíai komɛi</b>	

An unreduplicated indefinite DPs may freely occur with (3-a) or without (3-b) negation. But their reduplicated (NPI) forms are only possible in the context of negation as shown in (4), supporting a view in the literature e.g. Zeijlstra (2013), that though NPIs do not induce semantic negation by themselves, they are only licensed in the context of negation. (4) and (5) also show that unlike languages like English, Gã NPIs can freely occur in both subject and object positions in the clause, just like Hindi (Lahiri 1998), Japanese, Korean, Tamil, and Basque.

- (3) a. Kwei é-ná-áá **shía ko** . b. Kwei na **shía ko** .  
 K. SBJ-see-NEG house INDEF K. see house INDEF  
 ‘Kwei did not see a house.’ ‘Kofi saw a house.’
- (4) a. Kwei é-ná-áá **shíako-shíako** . b. \*Kwei na **shíako-shíako** .  
 K. SBJ-see-NEG house-RED K. SBJ.see house-RED  
 ‘Kwei did not see any house.’
- (5) **Moko-moko** é-ná-áá shía ko.  
 someone-RED SBJ-see-NEG house INDEF  
 ‘Nobody saw a house.’

Furthermore, the data seem to suggest that these reduplicated indefinite DPs exhibit properties of both strict NPIs. For instance, the NPI is required to be in the same immediate clause as the negation, as in (6), and such NPIs have a distribution that is comparable to other strong NPIs in Gã. For instance they can occur with NEG-Raising verbs, as in (7).

- (6) Kwei é-ná-áá [<sub>CP</sub> ákɛ **shía ko** (\***shía ko**) yɛ jɛmɛ ]  
 K. SBJ-see-NEG COMP house INDEF house INDEF at there  
 ‘Kwei didn’t see that there is any house lying there.’
- (7) Dede sú-sú-úú [<sub>CP</sub> áké Kwei na **shía ko shía ko** ]  
 D. imagine-NEG COMP K. see house INDEF book INDEF  
 ‘Dede didn’t imagine that Kwei saw any house.’

Given that the semantics of the NPIs created via reduplication is non-compositional, we could assume that we get a reduplicated indefinite DP as an NPI when the D head of the indefinite DP which (I assume) also carries a polarity feature is valued by a c-commanding NEG head. Giannakidou (2000, 2007), among others, have proposed this feature to obtain for NPIs. If we went this way, a negatively valued POL feature is overtly realized reduplication at PF i.e. PF interprets this as an instruction to totally copy the DP e.g. Frampton (2009). This could explain why non-reduplicated indefinite DPs are never NPIs in Gã. If this proposal is on the right track, then we address the key questions about NPIs postulated by Ladusaw(1996): the licenser is NEG, the licensee is (indefinite) D which needs to value its POL feature, the licensing relation requires NEG to c-command indefinite D, and an unlicensed D results in a non-reduplicated indefinite DP at PF, and hence no NPI.

Alternatively, if we pursued the idea of Collins and Postal (2014) for Gã, i.e. that the the NEG of NPIs originates with the indefinite DP, then we could claim that the reduplication is as a result of copying one indefinite DP to a higher position and not deleting the lower copy.

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# Telicity and iconic scales in ASL

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**Overview.** In a series of papers ([6][4] *i.a.*), Wilbur shows that a number of sign languages display a non-arbitrary form-to-meaning correspondence in the verbal lexicon: telic verbs end with sharp deceleration (‘end-marking’); atelic verbs do not. Figure 1 provides an example. In ASL, Wilbur also shows that the phonetic form of a verb may be manipulated with semantic effect. In this talk, I provide an analysis of these facts in terms of structural iconicity, where the interpretation of a sign preserves abstract structure of the form of the sign. I follow [3] in assuming that the meanings of change-of-state verbs are derived from scales; I argue that verbs in ASL iconically represent these scales, and that end-marking on telic verbs is the iconic representation of the maximum of a closed scale.

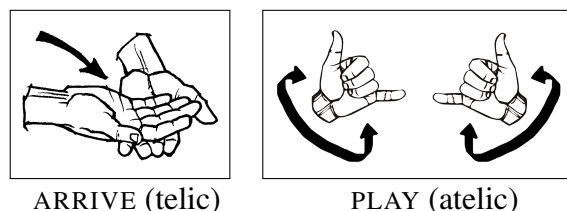


Figure 1: Images of ARRIVE and PLAY in ASL

**Gradient manipulations.** In ASL, Wilbur shows that the phonetic form of a verb may be manipulated with semantic effect. For example, the verb SIT-DOWN in ASL ends with contact between the signer’s two hands; if the sign is produced without this contact at the end, the verb is interpreted roughly as ‘almost sat down.’ If the verb DIE is signed slowly, it is interpreted roughly as ‘slowly die.’ Wilbur proposes that these phonetic features are discretely codified in the grammar as a finite set of combinatorial morphemes. Here, I argue that these effects arise not from discrete morphemes, but from an iconic mapping that preserves abstract geometric structure from the form of a sign to its meaning. As evidence, I present examples with gradient interpretive effects that cannot be generated by a discrete combinatorial system alone.

First, Figure 2 presents an example where the reduplicated sign GIVE accelerates from a length of 0.27 seconds down to a length of 0.07 seconds. The resulting interpretation is that the event occurred at a speed that increased over time. Critically, the interpretation of acceleration is only possible with arbitrarily many levels of speed represented.



Figure 2: Reduplicated GIVE

Second, pronunciation of a sign can be interrupted by pauses; the resulting inference of this ‘bit-by-bit’ inflection is that the event occurred gradually reaching successive states towards completion of the event. These intermediate markers are sensitive to fine-grained temporal and spatial modifications. For example, if the verb DIE is signed with an increased number of pauses as the motion of the sign nears its end point, this is interpreted as meaning that the subject’s health declined more and more slowly until the moment of death. In order to capture this meaning, the interpretive system must be able to preserve information from at least two different dimensions: the time elapsed and the distance that the hand has traveled.

**Verbal scales.** [2] observes that many adjectives come associated with scales, allowing gradability with degree modifiers like English *very*. [2] shows that adjectives display different semantic properties depending on whether their associated scale contains a maximal and/or minimal element. [3] argues that a similar decomposition holds for verbs, based on the observation that verbs are sensitive to the same categories as adjectives, as exemplified by pairs

like *wide/widen* and *dry/dry*. Of note, verbs based on closed scales have a telic and an atelic reading, as in (1). In contrast, verbs based on open scales are always atelic, as seen in (2).

- (1) a. The towel dried for an hour.  
b. The towel dried in an hour.
- (2) a. The gap between the boats widened for a few minutes.  
b. ?? The gap between the boats widened in a few minutes.

For [3], pragmatic principles determine the meaning of a change-of-state verb; critically, verbs based on closed scales admit the (telic) meaning in which a degree increases to a maximum.

**Iconic scales.** [1] argues that adjectival scales are iconically represented in Italian Sign Language (LIS): when the phonological form of an adjective includes a path motion, a comparative form can be constructed by signing the adjective at two different positions along the path.

I propose that the same scales that are iconically represented in adjectives are also iconically represented in change-of-state verbs in ASL.

Specifically, for each point in the production of a verb, we say that (a) the time that has elapsed after the onset of the sign is proportional to the time that has elapsed after the start of event, and that (b) the distance that has been traversed from the beginning of the phonetic motion (compared to a default motion) is proportional to the change along a scale from the initiation of the event (compared to a canonical event). When a verbal form travels the maximal distance that a phonological motion can travel (perhaps due to contact with another bodypart), an iconic condition entails that the scalar change reaches a maximal degree.

Importantly, the iconic condition on endpoints is only defined if a scalar maximum exists—that is, if the meaning of the verb is based on a closed scale. As above, verbs based on closed scales are exactly those verbs which receive telic meanings. End-marking tracks telicity.

**Extension: *again*-ambiguities.** In English, the adverb *again* has been shown to be ambiguous between a repetitive reading and a restitutive reading; e.g., the sentence ‘*I closed the door again*’ either means that I closed the door twice or that I returned it to a state of closure.

For some signers, ASL shows a similar ambiguity with AGAIN. When AGAIN is used with iconically incomplete verbs (where the phonetic motion stops before completion), preliminary results suggest that two readings of AGAIN remain available. Critically, the restitutive reading of (3) presupposes that the door was previously in a state of *being incompletely closed*. Note that this is not a possible reading of the English sentence ‘*I almost closed the door again*.’

- (3) I DOOR AGAIN CLOSE-incomplete.

The availability of the restitutive reading shows that the state of incomplete closure must be retrievable from the meaning of the modified verb so that it can be targeted by *again*. This state is available on a scale-based decomposition, which represents the full set of closure-degrees. This lends support for a version of [5]’s scale-based analysis of *again*-ambiguities.

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## ***Wh-kin*: multiple *wh* and additivity in Finnish interrogatives and declaratives**

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In Finnish multiple *wh*-questions with two *wh*-phrases, one *wh*-phrase must be fronted to the CP, and the other must remain in situ. When the *wh*-phrases appear bare, only the structurally higher one can be fronted. However, either *wh*-phrase may move if the additive particle *-kin* ('also', 'too') is attached to the one staying in situ. This modulation of superiority effects in multiple *wh*-questions is shown in (1).

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|--|--|
| (1) Multiple <i>wh</i> -question (bare- <i>wh</i> )  | Multiple <i>wh-kin</i> -question ( <i>wh-kin</i> )   |
| a. Kuka ost-i mi-tä?<br>who-NOM buy-PAST.3SG what-PAR<br>'Who bought what?'                                | a'. Kuka ost-i mi-tä-kin?<br>who-NOM buy-PAST.3SG what-PAR.KIN<br>'Who bought what?'                               |
| b. *Mi-tä <sub>i</sub> kuka os-ti t <sub>i</sub> ?<br>what-PAR who-NOM buy-PAST.3SG<br>'What did who buy?' | b'. Mi-tä <sub>i</sub> kuka-kin ost-i t <sub>i</sub> ?<br>what-PAR who-NOM.KIN buy-PAST.3SG<br>'What did who buy?' |

Huhmarniemi and Vainikka (2010) follow Hakulinen et al. (2004) in assuming that the *wh-kin* phrase is interpreted as a distributive quantifier that takes scope over the interrogative. The disappearance of superiority effects is due to the requirement that the possible values of the *wh-kin* phrase must be contextually given, which brings *wh-kin* in line with Pesetsky's D-linking account of superiority in multiple *wh*-questions (1987). Indeed, while a bare-*wh*-question can receive a single-pair answer, a multiple *wh-kin*-question cannot: its multiple-pair answer must map each member of the contextually given *wh-kin* to a possibly different member of the in situ *wh*-phrase. It is also possible to give a functional answer to a *wh-kin* question, in which case the presence of a co-indexed possessive pronoun in addition to the coindexed possessive suffix is either obligatory (2a) or ungrammatical (2b).

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|---|--|
| (2) <i>-kin</i> on object- <i>wh</i>  | <i>-kin</i> on subject- <i>wh</i>  |
| a. Kuka rakasta-a ke-tä-kin <sub>i</sub> ?<br>who-NOM love-PR.3SG who-PAR.KIN<br>'Who loves whom?'    | b. Ke-tä kuka-kin <sub>i</sub> rakasta-a?<br>who-PAR who-NOM.KIN love-PR.3SG<br>'Whom does who love?'  |
| i) *(Häne-n <sub>i</sub> ) äiti-nsä <sub>i</sub><br>his/her-GEN mother-NOM.PX/3SG<br>'His/her mother' | i) *(Häne-n <sub>i</sub> ) äiti-ä-än <sub>i</sub><br>his/her-GEN mother-PAR.PX/3SG<br>'His/her mother' |

Huhmarniemi and Vainikka argue that *wh-kin* must be bound by a c-commanding fronted *wh*-phrase. However, multiple *wh*-phrases (with *-kin* attached to the second phrase) also occur in plain declaratives with no interrogativity, as in (3). In declaratives, both *wh*-phrases stay in situ. (3b), for example, is interpreted as an assertion of there having been multiple talking events between different, unspecified people. Absence of *-kin* leads to ungrammaticality.

- |  |  |
|--|--|
| (3) a. Asu-i-n milloin mi-ssä-kin.<br>live-PAST.1SG when where-INE.KIN<br>'I lived in different places at different times' | a'. *Asu-i-n milloin mi-ssä.<br>live-PAST.1SG when where-INE |
| b. Kuka tek-i mi-tä-kin.<br>who-NOM do-PAST.3SG what-PAR.KIN<br>'Different people did different things'                    | b'. *Kuka tek-i mi-tä.<br>who-NOM do-PAST.3SG what-PAR       |

Moreover, Finnish allows triple *wh(-kin)*-questions where the middle-*wh* may either carry *-kin* or not. When it does, the question is interpreted as a real triple *wh*-question. When it does not,

the possibility of *wh-kin* declaratives makes an answer that only specifies the value of the fronted *wh* acceptable. It is not clear whether (4b) can be interpreted as a triple *wh*-question.

- (4) a. Kuka asu-i mi-ssä-kin milloin-kin?  
who-NOM live-PAST.3SG where-INE-KIN when-KIN  
‘Who lived when where?’  
b. Kuka asu-i mi-ssä milloin-kin?  
who-NOM live-PAST.3SG where-INE when-KIN  
‘Who lived in different places at different times?’

It may well be that the context-givenness of *wh-kin* accounts for the lack of superiority effect in (1b’). However, if *wh-kin*-questions require that *wh-kin* be bound by a fronted *wh*-phrase, the grammaticality of (3a-b) where no *wh* is fronted is surprising. The grammaticality of *wh*-phrases in declaratives of course in itself raises the question of what the Finnish *wh*-phrases denote, and how they can appear without interrogative clause typing.

In this poster, I explore two possible accounts of the interpretational data. It is assumed in both that *wh*-phrases denote sets of possible referents (Hamblin 1973), and that the host phrase of *-kin* determines the interpretation to some extent.

First, functional analyses of multiple *wh*-questions (Dayal 1996) assume that there is a functional dependency between the subject *wh*-phrase (domain) and the other *wh*-phrase (range). To account for the *wh-kin* data, it could be assumed that the attachment of *-kin* determines the domain of the function, and not subjecthood. Extending the functional analysis to *wh-kin* declaratives means that their meaning is a set of propositions as well.

The second account leans on work in inquisitive semantics (Ciardelli et al. 2012), and classifies *-kin* as a MO particle in the sense of Szabolcsi 2015. In Szabolcsi 2015, MO particles express universal quantification, additivity and conjunction, and require that the immediately larger context is interpreted as the lattice-theoretic meet of the semantic contribution of the particle host and something else. While declaratives with *wh-kin* are admittedly highly unspecific, they might be argued to contain the information that there exists an intersection of sets of worlds in which the actual world is situated. The intersecting sets of worlds are information states where it is known that in each world of the set, one member of *wh-kin* is mapped to some member of the other *wh*. As the same world may map two distinct members of *wh-kin*<sub>1</sub> to the other *wh*, these sets of worlds intersect in many ways. Thus, a *wh-kin* declarative is informative, excluding the possibility that there is only one pairing of values (the single-pair answer), but also inquisitive, requiring that the actual world be situated in one of the possible intersections of the information states without specifying which one. In *wh-kin* questions, then, the existence of a this intersection is presupposed, and the answer provides the pairings of *wh-kin* and the other *wh* that define the information states in the intersection of which the actual world lies.

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## Rethinking the A/A'-distinction: evidence from English Tough Movement

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**Introduction.** The *tough-movement* (TM) construction in English (1) poses longstanding theoretical, challenges primarily owing to its seemingly paradoxical display of A and A'-behaviors.

- (1)      a. It is tough to analyze TM.    b. TM<sub>1</sub> is tough to analyze t<sub>1</sub>.

Thus while TM i) targets a Case position and triggers  $\phi$ -agreement, ii) fails to exhibit weak-crossover (Lasnik & Stowell 1991), iii) creates new antecedents for binding (Pesetsky 2012), and iv) need not reconstruct for principle C (Pesetsky 2012) (A-behavior), it also i) can be long-distance and cross over NPs, ii) creates islands for A'-movement (Chomsky 1981), and iii) licenses parasitic gaps (Chomsky 1981) (A'-behavior). Building on recent discoveries concerning Dinka (Nilotic; van Urk 2015), I suggest that English *v* may host a composite A/A'-probe and that TM is derived via composite A/A'-movement. This approach derives the mixed A/A'-behavior and captures many otherwise puzzling constraints on TM.

**Composite A/A'-probing** Recent discoveries in a number of domains (Coon 2014; Deal 2014; van Urk 2015) support the idea that a head bearing two sets of unvalued features can form a *composite*-probe that searches for both sets simultaneously. A salient feature of composite probes, termed *multitasking* (2), is that an intervening XP that bears only a subset of the features on the probe (here H) does not trigger minimality effects (Rezac 2013; Richards 2015; van Urk 2015). Crucially, van Urk shows that in Dinka, (2)  $H_{[\alpha; \_; \beta; \_]} \dots XP_{[\alpha; 5]} \dots [\dots YP_{[\alpha; 6; \beta; 9]} \dots]$  a V2 language, (long distance) movement to Spec(CP) exhibits mixed A/A'-behavior, for example triggering  $\varphi$ -agreement on C and Case assignment on the moved DP, but skipping over intervening DPs (among other mixed properties). To explain this, van Urk proposes that C in Dinka is a locus for  $\varphi$ - and A'-features and thus may bear a composite A/A'-probe, suggesting such probes are optionally made available by UG.

In English, there is a clear split of  $\varphi$ - and A'-features in the left periphery, hosted on T and C respectively, ruling out composite probes in this domain. However, evidence from *assure*-class verbs (Kayne 1984) suggests that *v*, which can host both  $\varphi$ - and A'-features (Chomsky 2000; Rezac 2013, a.o.), can host a composite probe: when the double-object and ECM constructions are combined, the result is illicit unless the infinitival subject bears A'-features. (3) is ungrammatical because the indirect object serves as an intervener for the  $\varphi$ -probe on *v*, blocking Agree into the infinitive and leaving the ECM subject without a licensing functional head (5). In (4), where the ECM subject bears  $\varphi$ - and A'-features, *multitasking* allows a composite A/A'-probe on *v* to overcome minimality and Agree with the ECM subject (6) (see Rezac 2013 for details and a related proposal & discussion of how IO is licensed in (2-b),(3-b)).

- (3) \*I assured [the reader] <sub>[Inf]</sub> the propositions to be incorrect]. (4) [Which propositions]<sub>1</sub> did you assure the reader <sub>[Inf]</sub> *t*<sub>1</sub> to be incorrect]?

(5) *v*<sub>[ $\varphi$ :<sub>-</sub>]</sub> [*vp* assure *IO*<sub>[ $\varphi$ :5]</sub> [<sub>[Inf]</sub> *SBJ*<sub>[ $\varphi$ :7]</sub> ...]] (6) *v*<sub>[ $\varphi$ :<sub>-</sub>,*wh*:<sub>-</sub>]</sub> [assure *IO*<sub>[ $\varphi$ :5]</sub> [<sub>[Inf]</sub> *SBJ*<sub>[ $\varphi$ :6,*wh*:9]</sub>]]

**Proposal** I propose that TM involves cyclic composite A/A'-movement triggered by successive *v* heads, terminating in matrix Spec(*v*P) (I postpone for now discussion of how this composite movement obtains cross-clausally). A step of pure A-movement displaces the moved DP from matrix Spec(*v*P) to Spec(TP).

- (7) [TP DP<sub>[TP]</sub> T [<sub>vP</sub> DP<sub>[vP]</sub> v [<sub>AdjP</sub> tough [<sub>Inf</sub> [<sub>vP</sub> DP<sub>[vP]</sub> PRO [<sub>vP</sub> v [... DP...]]]]]]]]]  
A-Agree A/A'-Agree A/A'-Agree

The terminal step of A-movement, from vP to TP, requires that the theory allow A/A'-movement to feed A-movement. As such, I maintain a conservative version of *The Ban on Improper Movement*: all that is forbidden is for pure A'-movement to feed pure A-movement (Chomsky 1973; May 1979; Abels 2007).

**Key Consequences** First, this analysis captures the mixed A/A'-characteristics of TM; I adopt van Urk's system for deriving the properties of mixed movement with respect to binding, weak-crossover, etc. Second, the analysis captures many puzzling constraints on TM that have never been adequately treated. Specifically, under the assumption that C in English hosts A'- but not  $\phi$ -features (Richards 2007; Chomsky 2008), the *ban on improper movement* leads to the prediction that movement to Spec(CP) may never feed A-movement. Given that TM involves a terminal A-movement step, we thus predict that insofar as intermediate movement to Spec(CP) is obligatory (C is a phase head; Chomsky 2001, et seq.), CPs should be islands for TM.

- (8) [TP DP [T [<sub>VP</sub> DP [<sub>VP</sub> v [tough [...] [CP DP [CP C [<sub>A'</sub> [...] [<sub>VP</sub> DP [<sub>VP</sub> v [...] DP... ]]]]]]]]]]]]

TM is thus predicted to be possible only in cases where intervening CP-phases are *absent*. To this end, Wurm-

brand (2014, 2015, to appear) has argued extensively that control infinitives and subjunctives differ from finite indicatives and *for-to* infinitives in lacking a left-peripheral phase boundary. To a first approximation, then, TM should be possible out of control infinitives (Chomsky 1973; Lasnik & Fiengo 1974; Browning 1989), and subjunctives (9) and blocked out of finite indicatives (10) and *for-to* infinitives. This is borne out straightforwardly with subjunctives (9) and finite indicatives (10).

- (9) a. ?This book is essential that you read *t*. (10) a. \*My book is annoying that you bought *t*.  
b. ?This document is important that you sign *t*. b. \*John is hard that Mary likes *t*.

Given that *for*+DP sequences following *tough*-predicates are ambiguous between a matrix PP and a *for-to* infinitive construal (11), it is non-trivial to test for the blocking effects of *for-to* infinitives, which has led to some controversy in the literature (cf. Bresnan 1972; Lasnik & Fiengo 1974 with Hartman 2012; Keine & Poole 2015). What is clear is that TM is severely degraded in contexts that force the *for-to* construal

- (11) a. It was hard [PP for Sue] [Inf to sleep] (see (12,13); non-thematic DPs and *not*-initial DPs can only  
b. It was hard [CP for Sue to sleep] be subjects – see Postal 1974 on the latter – ruling out a PP  
construal). TM also semantically disambiguates in favor of a

matrix PP construal (cf. (14), (15)), suggesting *for-to* infinitives but not matrix PPs block TM.

- (12) a. It's impossible [CP for there to be a book about Max] (13) a. It was hard (on me) [CP for not many people to buy my  
b. [\*]Max is impossible [CP for there to be a book about book]  
*t*]. (Lasnik & Fiengo 1974) b. \*My book was hard [CP for not many people to buy *t*]  
(14) It was hard for every lawyer to pass the bar exam (15) The Bar Exam is hard for every lawyer to pass  
= every lawyer had trouble passing the exam (matrix PP) = every lawyer had trouble passing the exam (matrix PP)  
= it was unlikely to come about that every lawyer passed ≠ it was unlikely to come about that every lawyer passed  
the bar exam (*for-to*) the bar exam (*for-to*)

The blocking effect of finite CPs weakens when the relevant clause is embedded in a control infinitival argument to the *tough*-predicate (16) (Chomsky 1973; Browning 1989; a.o.). Structurally speaking, TM in these

- (16) a. ?Bill is hard [Inf to believe [CP that John fired *t*]]. b. ?The test was hard [Inf to pretend [CP I passed *t*]].

cases is parallel to movement out of relative-clause and *wh*-islands: all cases involve movement that is expected to be blocked by an inaccessible CP layer but is nonetheless possible, subject to certain limitations (Pesetsky 1984; Postal 1998). It thus appears that the grammar provides a mechanism to “skip over” or ignore

- (17) [<sub>VP</sub> wh [... [<sub>CP</sub> wh [... [<sub>t</sub> [... *t* ... *t* ... ]]]]] inaccessible CPs in some cases (17). Strikingly, TM out  
↑ of finite clauses shows the same collection of behaviors as  
movement out of *wh*-islands, one of which is that extrac-

tion is degraded for objects and impossible for subjects, thus deriving this formerly mysterious constraint on TM and corroborating the core details of the analysis. Of course, we must ask why such special mechanisms

- (18) a. \*Who did you ask whether *t* likes Mary? (19) a. \*John is hard to believe [CP *t* liked Sue]  
b. ?Who did you ask whether Mary likes *t*? b. ?John is hard to believe [CP Sue liked *t*]

for skipping inaccessible CPs – violating subjacency – are impossible for finite CPs when they are arguments to *tough*-predicates (10). The key is to observe that when *tough* is combined with a finite CP argument, it functions as an *object-experiencer* predicate (Belletti & Rizzi 1988; Pesetsky 1995): instead of describing the ease or difficulty with which an agent carries out an action – the salient reading when it is combined with a control-infinitive – *tough* in (20) describes the experience of an optionally overt argument induced by the event described in the CP. Following Hartman (2012), CP arguments of obj-exp predicates obligatorily extrapose. Subjacency-violating movement can be independently shown to be impossible out of extraposed clauses ((21); Taraldsen 1981); the inability to extract out of finite CP arguments to *tough* follows.

- (20) a. It was hard (on me) that no-one liked my book. (21) a. ?Who did you wonder (\*yesterday) if Sue met *t*?  
b. It was annoying (to me) that no-one liked my book. b. ?What book did you meet the prof (\*once) who wrote *t*?

Given that this analysis posits A/A'-movement *into* the matrix clause, a final consequence is that TM should create islands for the A'-extraction of and licenses parasitic gaps in vP-internal matrix-clause arguments. This is borne out (20,21), as expected if TM involves an A'-like step into the matrix clause.

- (22) a. Who was it foolish of to yell at Sue? (23) ?These books were tough [for critics of *pg*] [to praise  
b. \*Who was Sue foolish of to yell at? *t* sincerely]. (Hukari & Levine 1990)

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## Subject/object symmetry: A spurious effect

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**Introduction.** Subject-object (S/O) asymmetries are a nearly ubiquitous presence in natural language (cf. English-type ECP effects where operations over objects are privileged and Austronesian subject-only effects where a sole external argument is accessible to A'-operations). The Polynesian language Niuean, however, displays a puzzling absence of familiar such asymmetries (Seiter 1980; Massam 2001; the authors' recent field work). In this paper, we show that the lack of S/O asymmetries in Niuean follows from the convergence of several independently observable properties that are each cross-linguistically well-attested: (i) a fused Voice-*v* head that licenses both arguments; (ii) an EPP on T triggering V/VP, not DP, fronting (Massam 2001; Clemens 2014); and (iii) the obligatory shift of specific objects to the *v*P edge.

**Subject/object symmetry.** Niuean subject and objects are equally accessible to higher probes. In particular, subject and object *wh*-words within a single clause do not evince superiority effects (1), although such effects do emerge when the *wh*-words originate in different clauses (2).

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|---|---|
| <p>(1) a. Ko e heigoa ne kai e hai?<br/>               Pred ABS what NFT eat ERG who<br/>               'What did who eat?'<br/>            b. Ko hai ne kai e heigoa?<br/>               Pred who NFT eat ABS what</p> | <p>(2) a. Ko hai ne pehe ne kaihā e heigoa?<br/>               Pred who NFT say PST steal ABS what<br/>               'Who said that he stole what?'<br/>            b. *Ko e heigoa ne pehe a hai ne kaihā?<br/>               Pred ABS what NFT say ABS who PST steal</p> |
|---|---|

Although Niuean *wh*-questions are clefts (Potsdam & Polinsky 2011), these facts are still puzzling: in English, superiority effects manifest when an operator moves over an overt *wh*-phrase:

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|--|--|
| <p>(3) a. *What is it that [Op<sub>1</sub> who saw <i>t</i><sub>1</sub>]?<br/>               DET choose GEN 3PL ABS 1SG<br/>               'their choosing me'</p> | <p>b. Who is it that [Op<sub>1</sub> <i>t</i><sub>1</sub> saw what?]<br/>               DET choose 1SG.GEN ERG 3pl<br/>               'my/me being chosen by them'</p> |
|--|--|

Additionally, both subjects and objects in Niuean can (copy-)raise into a higher clause (Seiter 1980). Either argument (but not both) can appear in the genitive case in certain nominalizations (4). We take genitive to be a structural case licensed by a probe on the nominalizing head *n*, again indicating that both arguments are equally accessible to higher probes.

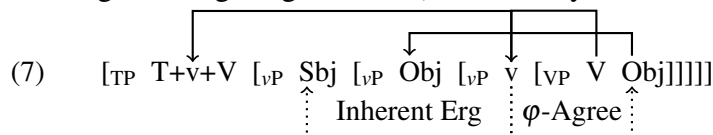
- |   |  |
|---|--|
| <p>(4) a. e kotofa ha lautolu a au<br/>               DET choose GEN 3PL ABS 1SG<br/>               'their choosing me'</p> | <p>b. e kotofa haaku e lautolu<br/>               DET choose 1SG.GEN ERG 3pl<br/>               'my/me being chosen by them'</p> |
|---|--|
- (Seiter 1980: 120)

**Proposal.** (i) We propose that Niuean is a fused Voice-*v* language (Pylkkänen 2008), with a single head responsible for licensing structural (absolutive) case on the internal argument and semantically introducing the external argument. Given that both arguments appear to be licensed *v*P-internally – both cases are optionally preserved under nominalizations, (5b) – we identify the (transitive) fused Voice-*v* head as the locus of inherent ergative case. Thus, Niuean has the varieties of Voice-*v* heads in (6):

- |   |   |
|---|---|
| <p>(5) a. Kua kotofa e lautolu a au.<br/>               Perf choose ERG 3PL ABS 1SG<br/>               'They chose me.'</p> | <p>b. e kotofa e lautolu a au.<br/>               DET choose ERG 3PL ABS 1SG<br/>               'them choosing me' (Seiter 1980: 120)</p> |
|---|---|
- 
- |   |  |
|---|--|
| <p>(6) a. Voice-<i>v</i><sub>trans</sub>: <math>\left[ \begin{array}{c} u\phi \\ \text{ERG} \end{array} \right]</math><br/>               <math>\lambda x_e. \lambda P_{s,t}. \exists e[\text{Ag}(x, e) \wedge P(e)]</math></p> | <p>b. Voice-<i>v</i><sub>unerg</sub>: <math>\left[ u\phi \right]</math><br/>               <math>\lambda x_e. \lambda P_{s,t}. \exists e[\text{Ag}(x, e) \wedge P(e)]</math></p> |
|---|--|

(ii) The EPP in Niuean attracts V/VP to T (we remain agnostic on whether V or VP fronts; see Massam 2001; Clemens 2014) so the subject always remains *in situ*. (iii) Concomitantly, as in many languages, specific/non-existential objects undergo obligatory shift out of VP, as diagnosed by the presence of a) overt case marking on the object and b) obligatory VSO word order. Non-specific/existential objects show up as unmarked NPs adjacent to the verb, resulting in VOS word order; the structures with such objects often have a frequentative/durative meaning (Seiter 1980: 69-78).

The convergence of (ii) and (iii) results in the subject and object ultimately occupying the specifier of the same head (Voice-*v*) in transitive VSO clauses, thus deriving their structural parity. Consider the derivation (7): VP is merged with Voice-*v*, which licenses structural absolutive case on the object. The external argument is merged in the specifier of Voice-*v*, marked with inherent ergative, and identified semantically as the agent. The EPP on Voice-*v* drives object-shift of specific objects to the edge of Voice-*v*. Finally, the T attracts V/VP (for simplicity we show V fronting; nothing hinges on this). Our analysis also accounts for the absence of a pronoun/anaphor distinction in Niuean (Massam 2006): reflexive binding is proscribed when the binder and the reflexive surface in the specifier of the same head



(*lethal ambiguity*, McGinnis 2004). Under our proposal, this is the default configuration, so Niuean simply does not have anaphors, given that they are not licensed in most cases.

One remaining puzzle is why object shift should obligatorily result in VSO word order. We propose that this may have to do with an order of operations issue brought on by the inherent nature of ergative case. If transitive Voice-*v* assigns inherent ergative to whatever is in its specifier, it is crucial that object shift *follow* the merger of the external argument, lest the object receive inherent ergative; if this is correct, obligatory VSO order can be taken to follow from obligatory *tucking in* of the shifted object (Richards 1997) below the subject.

**Implications & cross-linguistic perspective.** Our approach reduces the cross-linguistically unusual lack of S/O asymmetries in Niuean to an unusual convergence of otherwise common properties: (i) a fused Voice-*v* head, (ii) an EPP targeting V/VP, and (iii) object shift. As a consequence, we expect to observe similar properties in other languages exactly when these properties converge. While overt object shift (iii) is extremely common, many languages with this property either lack either evidence for a fused Voice-*v*, i.e., lack property (i), or have an EPP that triggers subject movement out of *v*P, thus inducing a structural asymmetry between the subject and the (shifted) object (lacking property (ii)). One promising case for evaluating our approach is Spanish, which has object shift and can optionally leave the subject *in situ* – properties (ii), (iii). As Ordóñez (1998) documents, S/O asymmetries disappear if and only if the object has shifted and the subject is *in situ*, that is in exactly those contexts that resemble the basic case in Niuean. Thus, in VOS clauses, object quantifiers can bind subject pronouns and vice versa (8) and superiority effects disappear (9). Gallego (2013) provides additional evidence based on agreement phenomena and adverb placement that object-shift results in S/O structural symmetry, with both subject and object in specifiers of *v*P.

- (8) a. Aquí presentó a cada niño<sub>1</sub> su<sub>1</sub> madre  
here introduced to each boy his mother  
“Here, his mom introduced each boy.”

- b. Aquí besó a su<sub>1</sub> amiga cada niña<sub>1</sub>  
here introduced to her friend each girl  
“Here, each girl kissed her friend”  
(Ordóñez 1998: ex. 10,21)

- (9) a. Quién compró qué?  
who bought what

- b. Qué (\*quién) compró quién?  
what bought who

Related cross-linguistic phenomena include Czech object shift, which has been analyzed as leading to S/O symmetry (Kučerová 2007), and A-scrambling in Japanese (Miyagawa 2003, 2005), where S/O symmetry also plausibly results from obligatory shift of specific objects to a position at the *v*P edge near an *in situ* subject (Saito 2006). If confirmed, these cases point to the widespread presence of S/O symmetry in configurations resembling Niuean VSO clauses, so that Niuean is an outlier only in having such a configuration as its basic clause structure.

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## Expletive Negation, Epistemic Modality and Sentential Complementation

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Emotive doxastics (*fear, hope*), inquisitive predicates (*ask*), negated veridical responsive predicates, dubitatives and negative predicates may select for sentential complements with Expletive Negation (EN), namely a negative marker (sentential negation or  $C^0$ ) that does not reverse the polarity of the embedded proposition. EN has been argued to be semantically vacuous (Espinal 2000), the same as real negation (Abels 2005), or to have some semantic contribution different than that of real negation (e.g. evaluative mood (Yoon 2011)). In this paper I identify some new *necessary conditions for EN-licensing* and I show that EN has the *meaning* of a weak epistemic modal.

**Condition I: Non-anaphoric semantic tense.** A comparative analysis of Classical Greek (ClGr), Russian, Hebrew, Spanish and French data with EN challenges existing analyses that EN is licensed by (subjunctive) mood. In French and Spanish, EN is licensed in the finite (subjunctive) complements of EN-selecting predicates but not in the infinitival complements that these verbs can also select. On the other hand, EN is grammatical in ClGr, Russian and Hebrew infinitives. As different diagnostics show (availability of morphological tense alternations, availability of two temporal adverbs with distinct reference (1b), licensing of an embedded subject (1c)) the distribution of EN in (infinitival) complements tracks the existence of an active tense operator in the embedded clause. In other words, EN is grammatical in complements with free or dependent tense but ungrammatical in complements with anaphoric tense (for Tense specifications see Landau 2004, a.o.). Assuming Grano's (2012) syntactic analysis of Tense, this means that EN scopes above T. Therefore, EN is predicted to be ungrammatical in obligatory control/restructuring contexts.

- (1) a. phobeisthai to me:te epenegkein pseude: timo:rian.  
fear.V.Inf.Pr the.D.n.Acc. NEG-and bring-upon.Pst.Prfv.Inf wrongful punishmen  
t  
“...to dread bringing upon him a wrongful punishment” Plat. L. 12.943d [ClGr]  
b. Včera oni bojalis' kak by mafija ix zavtra ne našla  
Yesterday they feared.PST how MOD mafia them tomorrow NEG find.PST.PRF  
“Yesterday they feared that tomorrow he might find them.” (N.R. p.c.) [Russian]  
c. Ha-kaba'im man'u me-ha-es le'hitpaset. [Hebrew]  
the-firemen prevented NEG-the-fire spread .INF  
“The firemen prevented the fire from spreading.” (Landau 2002)

**Condition II: Question-selecting predicates with existential force.** By adopting current analyses of emotive doxastics, dubitatives (Anand & Hacquard 2013), rogative predicates (Uegaki 2012), and negative predicates (White et al. 2014), I show that what EN-selecting predicates have in common is that they select for  $\langle \langle s, t \rangle, t \rangle$  complements and that they introduce a bipartition of the doxastic alternatives of the epistemic subject (i.e. they have existential force  $\exists$  or  $\neg\forall$ ). On the basis of differences like that between (3) and (4), I depart from Anand & Hacquard's (2013) analysis of emotive doxastics and Uegaki's (2012) analysis of interrogatives, and I argue that the complementizer *that* (not the matrix predicate) introduces the assertion of the embedded proposition ((4b) was originally proposed by Uegaki for  $\llbracket \text{know} \rrbracket^w$ ).

- (3) a. John knows whether Mary closed the door.  $\neq$  *Mary closed the door.*  
b.  $\llbracket \text{know whether } p \rrbracket^w = \lambda Q \in D_{\langle st, t \rangle} : \lambda x. \forall p \in Q [p(w)=1 \rightarrow \text{DOX}_{x,w} \subseteq p]$ .  
(4) a. John knows that Mary closed the door.  $\neq$  *Mary closed the door.*

b.  $\llbracket \text{know that } p \rrbracket^w = \lambda Q \in D_{<st,t>}: [\exists p \in Q[p(w)=1]] \wedge \lambda x. \forall p \in Q[p(w)=1 \rightarrow \text{DOX}_{x,w} \subseteq p]$ .

**Semantic Contribution of EN.** Under the present account (cf. Condition II), the meaning of an emotive doxastic has four components: a desirability scale, a representational component, an “uncertainty condition” (Anand & Hacquard 2013) and a probability scale. Matrix negation can target the probability scale regardless of whether EN is present or not (5a), whereas in the absence of EN it cannot target the desirability scale (5b). On the other hand, a sentence with EN cannot be a felicitous answer in a question, as shown in (6).

- (5) a. Dhen fovame pos/ mipos kseri tin alithia. Ime sighuros  
NEG fear that/ lest.NEG-that know the truth. Am sure  
pos ehi mavra mesanihta. [Modern Greek]  
that has black midnight

“I do not fear that he knows the truth. I am sure he is totally ignorant.”

- b. Dhen fovame mipos/#pos kseri tin alithia. Stin  
NEG fear lest.NEG-that/that know the truth. in-the  
pragmatikotita to elpizo kiolas.  
reality it.CL hope even

“I do not fear that he knows the truth. In fact, I even hope it.”

- (6) Ja bojus’ kak by on ne razbil mašimu. [Russian]  
I fear that MOD he NEG break.PST.PRF. car.ACC

(Will he break the car?) #I fear that he might break the car.

These data show that EN marks a set of doxastic alternatives as equally probable, indicating that the speaker does not have any kind of evidence about their ordering. In other words, EN alters the probability scale introduced by the declarative complementizer from that in (7a) to that in (7b). The EN sentence is less informative than that with the *that*-complement and thus it triggers the scalar implicature in (7c). For that reason, an EN-complement results to an infelicitous answer in (6), while matrix negation in (5) can target either the probability or the desirability scale.

- (7) a.  $\varphi >_{\text{LIKELY}} \neg\varphi$  *that*-complement  
b.  $\varphi \geq_{\text{LIKELY}} \neg\varphi$  EN-complement  
c.  $\varphi =_{\text{LIKELY}} \neg\varphi$  (cancellable) scalar implicature triggered by EN

Further evidence attesting the connection between EN and epistemic modality comes from epistemic modal licensing: epistemic modals are ungrammatical in sentential complements with EN (8), while they can alternate with epistemic *tha* (‘will’) in counterfactuals (9). The fact that EN asserts (7b) is also evident from its use in counterfactuals (9) and the minimal pair in (10).

- (8) Fovame pos/ \*mipos mporei na fighun ta pedhia simera. [MG]  
Fear that/ lest.NEG-that might SBJ leave the children today

“I fear that/ \*lest children might leave today.”

- (9) An epine afto to siropi, mipos/ tha ghinotan kala.  
If drink.PST this the syrup, lest.NEG-that/ will become fine

No EN: “If he drank that syrup, he *would* recover.”

EN: “If he drank that syrup, he *might* recover.”

- (10) Elegha pos/ mipos chriazese voithia.  
say.Pst.Imfv.1SG that/ lest.NEG-that need.Prs.2SG help

No EN: “I thought that you need help.”

EN: “I wondered whether you need help.”

**Conclusions.** EN marks doxastic alternatives as equally likely, and thus it can only be selected by predicates which introduce a bipartition of the doxastic alternatives of the epistemic subject

(condition II); thus selection by predicates with universal force would cause a semantic clash. The semantic contribution of EN, the fact that it scopes above Tense (condition I), its complementary distribution with epistemic modals (8) and its use in counterfactuals (9) indicate that EN acts as an epistemic modal. These findings are in accordance with recent proposals for 'meaningful' complementizers (Kratzer 2006, Moulton 2009, a.o.) yet licensing condition II of EN indicates that attitude predicates contribute quantification over possible worlds.

## Obligatorily Control is fallible: failure of OC PRO yields *pro*

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Sundaresan (2014) notes a puzzling pattern, which she dubs the “Finiteness/*pro*-drop generalization” (FpDG): “For (at least a non-trivial set of) *pro*-drop languages . . . *pro*-drop is disallowed in the subject position of a prototypically non-finite clause.” FpDG is based on the observation of a number of *pro*-drop languages (Spanish, Italian, Romanian, Hungarian, Japanese, Hindi and Tamil), where an alternation can be found between overt and covert subjects in certain non-finite clauses (as in Spanish (1)):

- (1) Al mostra-r María<sub>i</sub>/EC<sub>\*i,j,\*k</sub> los síntomas de la gripe, Carlos<sub>j</sub> se vacun-ó.  
P show-INF María<sub>i</sub>/EC<sub>\*i,j,\*k</sub> the symptoms of the flu, Carlos<sub>j</sub> SE vaccinate-PST  
“[<sub>CP</sub> {With Maria<sub>i</sub>/EC<sub>\*i,j,\*k</sub>} showing the symptoms of flu], Carlos<sub>j</sub> got vaccinated.”

Given the possibility of an overt, non-anaphoric subject in such clauses and of *pro*-drop elsewhere in these languages, we expect the covert subject to (at least optionally) be *pro*. But Sundaresan shows that only the restricted interpretation associated with OC PRO (Landau, 2013’s “OC Signature”) is possible: the null subject is obligatorily coreferent with a matrix controller, obligatorily *de se* in attitude contexts, and yields only sloppy readings under ellipsis. Under standard approaches, which posit two inherently distinct elements PRO and *pro* with different underlying properties and conditions on their distributions (e.g. Chomsky, 1981; Martin, 2001; Hornstein, 1999; Landau, 2004), the impossibility of *pro* in these contexts is mysterious: i.e. it cannot be attributed to the unavailability of *pro*-drop or to the idea that *pro* would not be Case-licensed (given the possibility of an overt nonfinite subject). In this paper we draw a connection between the the FpDG and another hitherto unexplained fact, namely that the interpretations available to *pro* are a proper superset of those available to OC PRO. I.e. *pro* need not be coreferent with a controller or interpreted *de se*, and it yields both strict and sloppy readings under ellipsis (also, see Landau, 2015, and works cited there, for the idea that *de se* is a special case of *de re*).

We argue that both of these observations can be accounted for if we eschew the “Inherent” approach to *pro* and PRO described above for a “Derived” approach, according to which PRO and *pro* label different manifestations of one underlying element, with the differences derived from its interactions with distinct grammatical environments (see also Borer, 1989; Manzini, 2009; Duguine, 2015; Fischer, 2015; Landau, 2015). Specifically, we posit a single element PRO/*pro* with an underspecified semantics. Crucially, this PRO/*pro* is subject to OC, implemented in terms of Agree (Landau, 2004), but in a way that is conditionally obligatory, but fallible, along the lines of agreement for Preminger (2011). That is, if the structural conditions are met for a particular PRO/*pro*, OC obligatorily applies, restricting it to the bound variable interpretation known as OC PRO. If, on the other hand, OC is not possible, there is no ungrammaticality, but rather the underspecified semantics associated with *pro* results as a default. An approach along these lines is common for the distinction between OC and NOC PRO — with NOC interpretations being available only when the structural conditions for OC are not met (Landau, 2013). We extend it to cover *pro* as well, adopting ideas from e.g. Bouchard (1984); Hornstein (1999) that NOC PRO should be assimilated to *pro* as what obtains when OC cannot be established. Of course, classic *pro* and NOC PRO may still have interpretive differences due to further contextual differences (see Landau, 2013, ch. 7), but for us they must be alike in **not** having the interpretive profile of OC PRO, which arises from the control relation.

This approach gets the basic distribution of OC PRO vs. *pro*/NOC PRO interpretations right. Given its dependence on Agree, OC is restricted by minimality and obtains obligatorily when a given PRO/*pro* is c-commanded by a local DP, as in (2). When no local c-commanding controller

is available, Agree fails, and the OC interpretation is not derived. E.g. clausal subjects are typically not c-commanded by a matrix DP, and fully finite embedded CPs are phases, thus it is generally impossible for their subjects to Agree with something outside the CP. Hence OC can't obtain into (most) clausal subjects ((cf. 3), involving "arbitrary control" which is standardly treated as NOC PRO) or full-fledged finite clauses (4).

- (2) [Duke<sub>i</sub>'s mother]<sub>j</sub> hates [PRO<sub>\*i/j/\*k</sub> to run out of beer].
- (3) [PRO<sub>NOC</sub> to run out of beer] would be a shame.
- (4) Gianni<sub>i</sub> ha deciso [che *pro*<sub>i/j/\*</sub>PRO<sub>i</sub> partirà domani]. (Italian)  
 Gianni has decided [that *pro* will-leave tomorrow]  
 'Gianni decided that he/she will leave tomorrow.'

Well-known cases of "finite control" typically involve subjunctives or other clauses with intermediate finiteness, where it is plausible to posit the lack of a phase boundary or an escape-hatch mechanism for Agree, yielding transparency for OC parallel to that in prototypical infinitives like (2) (see e.g. Landau, 2008).

Our Derived approach to the distinction between *pro*/NOC PRO and OC PRO has a series of clear advantages over traditional Inherent ones. It posits a single underlying element rather than two, yielding a modest Occam's Razor gain. More importantly, it draws an explanatory connection between the distributions of PRO and *pro* and how they are interpreted. The interpretations available to OC PRO are a proper subset of those available to *pro*/NOC PRO because control restricts the referential and attitudinal possibilities of PRO/*pro*, and when it fails, the restrictions simply don't apply. Above all, we have an explanation for Sundaresan's FpDG. Since OC PRO and *pro* are really just two contextually-conditioned interpretive realizations of a single underlying element, we predict that they will be in complementary distribution. The clause types exemplified by (1) have an intermediate status: unlike complements of verbs like 'try', they allow inherently non-controllable subjects like *María*, but unlike prototypical finite clauses, they are transparent to control. The latter point means that, whenever the subject is a PRO/*pro*, control will apply obligatorily, yielding the OC interpretation, and automatically ruling out the less restricted reading associated with *pro*, as desired.

A question that might be asked at this point is why, if OC PRO and *pro* are really two interpretations of the same element, OC PRO seems to be universal, while *pro*-drop is famously parametrized. Note first that at least certain types of *pro*-drop are related to the morphological expression of agreement (though characterizing the precise relationship remains tricky, see Biberauer, Holmberg, Roberts, and Sheehan, 2010; Duguine, 2015, for discussion), a point that is itself subject to cross-linguistic variation. PRO, on the other hand, is primarily found in precisely those contexts where agreement is blocked even in languages with rich agreement, so that variation is largely suppressed. Furthermore, for us, NOC PRO is actually *pro*, which reduces the parametric variation: i.e. languages like English, then, do in fact allow a restricted form of *pro*-drop. The conditions on silent subjects are in any case clearly subject to cross-linguistic variation, and there is ample evidence (Barbosa, 2009; Szabolcsi, 2009; Livitz, 2014, a.o.) that DP-(c)overtness and -interpretation (including OC vs. NOC) are conditioned by orthogonal factors. Our analysis speaks to the latter, not the former. Thus there is nothing to stop underlying PRO/*pro* in a particular context from surfacing as silent *pro* in Italian, but as an overt pronoun in English. This of course raises the question to what extent a Derived approach may be extended to the pronoun/anaphor distinction more generally. It is clear that not all pronouns and anaphors can be realizations of a single underlying element PRO/*pro*, given that the complementarity between (overt) pronouns and anaphors breaks down in certain environments (Reinhart and Reuland, 1993, among others), and the simple fact that object pronouns are not obligatorily bound by the

subject. What is less clear is whether such an account should be extended to purported overt variants of OC PRO and *pro* (Manzini, 2009). This is a matter of ongoing research.

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## Categorizing heads are l-selectors: Idiosyncratic PP selection can vary by lexical category

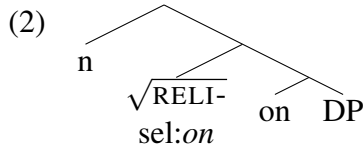
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A recent controversy has arisen over the question whether roots have selectional features and can take complements, as Harley 2014 claims (following most of syntactic tradition of the past 50 years), or not, as de Belder and van Craenenbroeck 2015 and many others (e.g., Borer 2013, Alexiadou et al. 2014, Lohndal 2014) have recently argued. I show that a new set of facts from PP selection in English (and Dutch and German, omitted here) support the modern idea that all arguments are severed from the root, and are introduced only in specifiers of functional heads that interact with the root, but these arguments are not sisters to the root.

A well-known compelling argument that roots are acategorical comes from selection: idiosyncratic selectional properties (sometimes known as ‘l(exical)-selection’, since the selected head is realized as a particular lexical item) appear to be stable across different realizations of a root:

- (1) a. They rely **on** oil.
- b. Their reliance **on** oil is well-known.
- c. They are reliant **on** oil.

Such facts indeed receive a satisfying explanation on a theory like that of Harley 2014<sup>1</sup> and its forerunners (see also van Craenenbroeck 2014 for discussion and references): the root itself selects for (the head of) its complement, and the root variously surfaces as a noun, verb, or adjective depending on what additional structure is added to the root (Borer 2005, 2013):



But there is a substantial class of roots (134 so far in a database I am constructing) that show idiosyncratic variable behavior across their realizations, showing mismatches in how the nominal, verbal, and adjectival forms mark internal arguments. The verb *oppose* takes a direct object, but the noun *opposition* and adjective *opposed* take a *to*P. In the worst cases, the preposition is different across all three categories, taking one preposition as a verb, another when surfacing in a noun, and yet a third in adjectival form: this holds for the root  $\sqrt{\text{PRD}}$  that underlies *pride*<sub>V</sub> *o.s.* *on*, *pride*<sub>N</sub> *in*, *proud*<sub>A</sub> *of*.

- (3) a. I oppose (**\*to**) lower taxes.
- b. My opposition {**to**/**\*of**} lower taxes is well known.
- c. I am very opposed {**to**/**\*of**} lower taxes.
- (4) a. She prides herself **on** her thoroughness.
- b. Her pride **in** her thoroughness is understandable.
- c. She is proud **of** her thoroughness.

This class of roots shows that it is not only the root that determines the head of the internal argument. It seems we would need to allow ‘joint selection’ by the root and the category node (*v*, *n*, *a*) together of the complement of the root. But such joint selection of complements is not technically feasible in the strictly bottom-up models of Merge, since Merge is conditioned on an identity between the selectional

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<sup>1</sup>Harley discusses only *study* *X*, *student of* *X*, but her point extends readily to selected PPs.

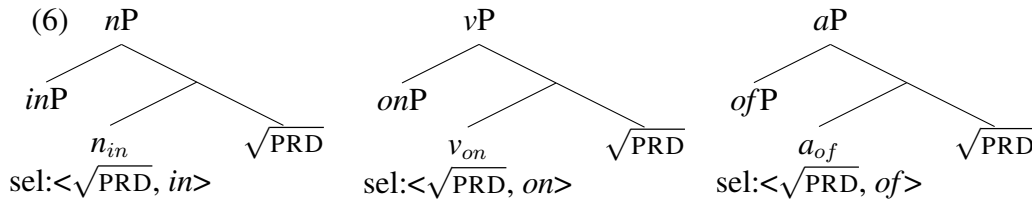
feature of the selector and the category (or head) feature of the complement. There is no way for the root  $\sqrt{\text{PRD}}$  by itself to select the right preposition: only when this root combines with *n* is *in* selected (*mutatis mutandis* for *a* and *v*). We conclude that the structures in (2) are incorrect:

Further evidence that selection by categorized roots can vary by category comes from historical changes in selection. In contemporary English, the verb *lust* can take either a *for* or *after* PP, but the noun *lust* can take only a *for* PP:

- (5) a. They lust {for/after} chocolate.  
b. Their lust {for/\*after} chocolate was insatiable.

I show that this pattern has been stable only since about 1920; in texts from 1800, the ratio of nominal *lust<sub>N</sub>* *for* to *lust<sub>N</sub>* *after* is 29:71 and steadily but not monotonically increases across the 19th century; at the same time, verbal *lust<sub>V</sub>* *for*:*lust<sub>V</sub>* *after* (which is vastly less frequent than the noun *lust<sub>N</sub>*, by a ratio of almost 1:99) varies from 40% to less than 5% before stabilizing between 40-50% over the past four decades. The fact that these ratios differ shows that the selectional properties of the verb and noun versions of *lust* vary independently; this fact is not consistent with putting selectional features on roots directly.

We need to list idiosyncratic selection information somewhere in the lexicon; these are not semantically conditioned alternations. The most obvious place in a Minimalist, compositional, nonlexical treatment of category that such information can be located is on the categorizing head itself:



The categorizing head thus has two selectional features: the first one for the root (its complement) and the second one potentially for a specifier which represents the first internal argument. These features are ordered, and accessed in a particular order by Merge (following Stabler, Müller, Bruening, Kobele, and Merchant).

This theory makes the correct prediction that outer categorizing heads (those heads that take already categorized heads as their complements) will never change the selection properties:

- (7) a. She exhibits great faith **in** God.  
b. She is very faithful **to** God.  
c. She exhibits great faithfulness {**to**/\***in**} God.
- (8) oppose (\*to), opposition to, oppositional to, oppositionality to
- (9) responder to/\*of, believer in/\*of, objector to/\*of

The account also sheds light on Neeleman's (1997) generalizations: there can be at most one idiosyncratic PP per root, and there are no 'quirky' PP subjects; since only the categorizing head can have these features, the menagerie of little *v* that introduce other arguments will not select for PPs.

**de Belder & van Craenenbroeck** 2015 'How to merge a root' *LI*; **Borer** 2013 *Taking form*; **Alexiadou, Anagnostopoulou, Schäfer** 2015 *External args. in transitivity alternations*; **Harley** 2014 'On the identity of roots' *Theor. Ling.* **Neeleman** 1997 'PP complements' *NLLT*

# Syntactic gangs: cumulative effects with weighted constraints

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**Claim:** I argue for the existence of ‘gang effects’ in syntax, i.e. particular constraints on syntactic operations can be analyzed as the cumulative effect of two permitted processes combining. The recurrent pattern we can identify, already well-known from phonology (Pater 2009), is that a language permits process A and B individually, but the combination of A&B is not possible. This will be demonstrated on the basis of restrictions on Left-Branch Extraction (LBE) in Slavic, defective intervention in Icelandic and successive-cyclic movement. I propose a constraint-based variant of Minimalism, in which each step of the derivation is subject to optimization (cf. Harmonic Serialism; McCarthy 2010, Heck & Müller 2013) with constraints bearing weights as in Harmonic Grammar (Legendre *et al.* 1990), thereby allowing for lower-ranked constraints to ‘gang up’.

**Multiple LBE:** A long-standing puzzle in the literature on wh-movement in Slavic is why multiple left-branch extraction (MLBE) seems to be impossible in languages with multiple wh-fronting (MWF) and left-branch extraction (LBE) (Fernandez-Salgueiro 2005, Grebenyova 2012). We would expect a language with both MWF (1) and LBE (2) to allow MLBE, but this is not the case.

- (1) Kto kogo priglasi na uži? (2) Čju on kupil [ t mašinu ]?  
 who whom invited to dinner whose he bought car  
 ‘Who invited whom to dinner?’ ‘Whose car did he buy?’ (Russian)
- (3) \*Kakoj<sub>1</sub> čju<sub>2</sub> [t<sub>1</sub> aktër] kupil [t<sub>2</sub> mašinu]?  
 which whose actor bought car  
 ‘Which actor bought whose car?’ (Grebenyova 2012)

Given standard accounts of LBE (e.g. presence/absence of DP; Bošković 2005), this restriction is puzzling. It is possible to derive the ban on MLBE if we take the view that the cumulative interaction of LBE and MWF is the cause for this ungrammaticality.

**Proposal:** I adopt a constraint-based approach to syntax akin to Harmonic Serialism (Heck & Müller 2007), where the result of cyclic-structure building is evaluated after each operation. As well as restricting the candidate set, this approach entails that syntactic operations are only permitted if they are *harmonically improving*, i.e. a movement operation is only licensed if it does not violate a more important constraint than non-movement. One could argue that this kind of evaluation is implicit in a number of analyses, e.g. *Merge over Move* (Chomsky 1995; see Müller 2015 for discussion). Rather than a traditional Optimality Theory (Prince & Smolensky 1993/2004) account using ranked constraints, this approach rests of the assumption of *weighted constraints* in Harmonic Grammar (HG) (Legendre *et al.* 1990, Pater 2009). In HG, constraints bear a numerical weight and violations are deducted from the base Harmony Score (0) of a candidate. In a language allowing LBE, the requirement that wh-phrases be in the specifier of a licensing head (C<sub>[wh]</sub>) can be captured by a constraint WH-CRIT. Furthermore, whatever ordinarily penalizes LBE can be represented by the constraint LBC (*Left-Branch Condition*). A language with LBE has the weighting  $w(\text{WH-CRIT}) > w(\text{LBC})$  meaning it is better to wh-move than respect LBC.

(4)

	WH-CRIT	LBC	
[CP C <sub>wh</sub> ... [VP V [DP wh NP]]]	$w = 2$	$w = 1.5$	$\mathcal{H}$
a. [CP C <sub>wh</sub> ... [VP V [DP wh NP]]]	-1		-2
b. $\mathbb{E}^{\mathbb{P}}$ [CP wh <sub>1</sub> C <sub>wh</sub> ... [VP V [DP t <sub>1</sub> NP]]]		-1	-1.5

(5)

	WH-CRIT	*MULTSPEC	
[CP C <sub>wh</sub> ... [vP wh ... wh]]	$w = 2$	$w = 1.5$	$\mathcal{H}$
a. [CP C <sub>wh</sub> ... [vP wh ... wh]]	-2		-4
b. [CP wh <sub>1</sub> C <sub>wh</sub> ... [vP t <sub>1</sub> ... wh]]	-1		-2
c. $\mathbb{E}^{\mathbb{P}}$ [CP wh <sub>1</sub> wh <sub>2</sub> C <sub>wh</sub> ... [vP t <sub>1</sub> ... t <sub>2</sub> ]]		-1	-1.5

If a language also allows MWF, then WH-CRIT will have a higher weight than some antagonistic constraint. I assume this to be \*MULTSPEC, punishing the creation of multiple specifiers. The

weighting  $w(\text{WH-CRIT}) > w(*\text{MULTSPEC})$  allows for MWF (5) as the summed weights of two constraints can ‘gang up’ to overthrow a more important constraint. In the derivation of MLBE, the first wh-movement step in (6) is licensed since it is *harmonically improving* ( $-3.5 > -4$ ).

(6) *Step 1:*

	WH-CRIT	*MULTSPEC	LBC	
[CP C <sub>wh</sub> ... [vP [DP wh NP] ... [DP wh NP] ]	$w = 2$	$w = 1.5$	$w = 1.5$	$\mathcal{H}$
a. [CP C <sub>wh</sub> ... [vP [DP wh NP] ... [DP wh NP] ]	-2			-4
b. $\mathcal{E}\mathcal{P}$ [CP wh <sub>1</sub> C <sub>wh</sub> ... [vP [DP t <sub>1</sub> NP] ... [DP wh NP] ]	-1		-1	-3.5

Taking the output of (6) as the input of the evaluation of the second wh-movement step (7), in creating an additional specifier, the summed weights of \*MULTSPEC and LBC turn out to be higher than a single violation of WH-CRIT. Thus, a second instance of LBE is not licensed since it is not harmonically improving.

(7) *Step 2:*

	WH-CRIT	*MULTSPEC	LBC	
[CP wh <sub>1</sub> C <sub>wh</sub> ... [vP [DP t <sub>1</sub> NP] ... [DP wh NP] ]	$w = 2$	$w = 1.5$	$w = 1.5$	$\mathcal{H}$
a. $\mathcal{E}\mathcal{P}$ [CP wh <sub>1</sub> C <sub>wh</sub> ... [vP [DP t <sub>1</sub> NP] ... [DP wh NP] ]	-1			-2
b. [CP wh <sub>1</sub> wh <sub>2</sub> C <sub>wh</sub> ... [vP [DP t <sub>1</sub> NP] ... [DP t <sub>2</sub> NP] ]		-1	-1	-3

The ban of MLBE follows from a single wh-movement step violating the LBC while also creating an additional specifier being more costly than leaving the wh-phrase in situ. This approach also derives the emergence of unexpected superiority effects with LBE (Fernandez-Salgueiro 2005).

**Defective intervention:** As well as a single movement step being blocked due to a gang effect, we would expect to find an Agree operation that is not harmonically improving. I argue that this is the case with so-called *defective intervention* (Chomsky 2000, Chomsky 2008) in Icelandic. In certain expletive configurations, agreement with a nominative is blocked by an intervening dative:

- (8) það virðist/\*virðast einhverjum manni [TP hestarnir vera seinir ]  
there seem.3SG/\*seem.3PL some man.DAT horses.NOM be slow  
‘It seems to some man that the horses are slow.’ (Holmberg and Hróardóttir 2003)

However, it is not the case that all datives block agreement with a nominative (Broekhuis 2008). As noted by Ussery (2009), Kučerová (to appear), dative intervention is restricted to bi-clausal environments (i.e. more than one TP) such as the raising context in (8). This can be modelled as a cumulative effect as follows: whereas it is OK to probe past a closer inactive DP, it is not possible if the lower nominative DP is outside the local TP. We can posit a constraint MINIMALLINKCONDITION (MLC) for the former as well as one militating against agreement outside the local TP (LOCALAGREE (LA)). As above, these two constraints are individually ranked lower than the constraint driving Agree, however their cumulative effect is sufficient to block agreement (11).

(9)

	AGREE	MLC	
[TP T <sub>[φ:□]</sub> ... [vP DP <sub>DAT</sub> ... DP <sub>NOM.PL</sub> ]]c	$w = 7$	$w = 4$	$\mathcal{H}$
a. [TP T <sub>[φ:□]</sub> ... [vP DP <sub>DAT</sub> ... DP <sub>NOM.PL</sub> ]]	-1		-7
b. $\mathcal{E}\mathcal{P}$ [TP T <sub>[φ:PL]</sub> ... [vP DP <sub>DAT</sub> ... DP <sub>NOM.PL</sub> ]]		-1	-4

(10)

	AGREE	LA	
[TP DP <sub>DAT</sub> T <sub>[φ:□]</sub> ... [vP ... [TP ... DP <sub>NOM.PL</sub> ]]]	$w = 7$	$w = 4$	$\mathcal{H}$
a. [TP DP <sub>DAT</sub> T <sub>[φ:□]</sub> ... [vP ... [TP ... DP <sub>NOM.PL</sub> ]]]	-1		-7
b. $\mathcal{E}\mathcal{P}$ [TP DP <sub>DAT</sub> T <sub>[φ:PL]</sub> ... [vP ... [TP ... DP <sub>NOM.PL</sub> ]]]		-1	-4

(11) *Defective intervention as a gang effect:*

	AGREE	MLC	LA	
[TP T <sub>[φ:□]</sub> ... [vP DP <sub>DAT</sub> ... [TP ... DP <sub>NOM.PL</sub> ]]]	$w = 7$	$w = 4$	$w = 4$	$\mathcal{H}$
a. $\mathcal{E}\mathcal{P}$ [TP T <sub>[φ:□]</sub> ... [vP DP <sub>DAT</sub> ... [TP ... DP <sub>NOM.PL</sub> ]]]	-1			-7
b. [TP T <sub>[φ:PL]</sub> ... [vP DP <sub>DAT</sub> ... [TP ... DP <sub>NOM.PL</sub> ]]]		-1	-1	-8

## Interpretation Domains in the Verbal Spine: Synthetic vs. Analytic morphology

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**Introduction** Cross-linguistically we observe that argument reduction (i.e. Passives) or increasing operations (i.e. Causatives) appear with either analytic or synthetic morphology on the verb. In this talk, we show that synthetic vs. analytic morphology is relevant for the range of interpretations a particular structure can obtain, obeying the generalization in (1):

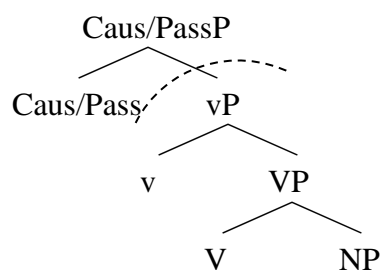
- (1) Synthetic morphology allows a range of interpretations whereas analytic morphology lacks such variability.

Evidence for the generalization in (1) comes from Passive and Causative Constructions cross-linguistically. We argue that morphology is a reflection of the way syntactic structure is spelled-out; in the case of synthetic morphology the Pass/Caus head and its complement  $v$ -head undergo merging thus licensing polysemy whereas in the case of analytic morphology the heads are spelled-out separately and the meaning is derived by strict compositionality.

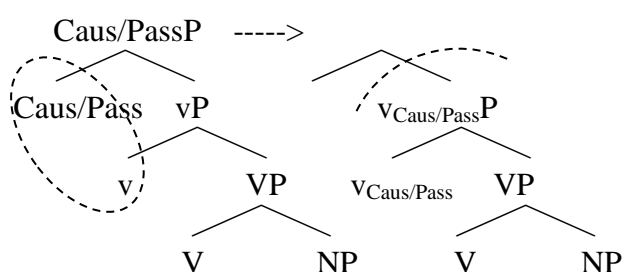
**Cross-linguistic evidence for (1)** In a number of languages that belong to different families (Albanian, Armenian, Amharic, Greek, PA Arabic, Quechua, Shakkinoono/ Kafinoonoo, Swedish, Turkish) the morphology used in synthetic - and crucially not in analytic passives - can also appear in at least one of the following environments; a) verbal reflexives and reciprocals, b) anticausatives, c) dispositional middles (as well as other constructions which vary cross-linguistically) which altogether constitute the so-called Middle Voice (see Kemmer 1993, Alexiadou & Doron 2012). In addition, synthetic causatives in many languages share the same morphology with benefactive, instrumental or comitative applicatives (Nedyalkov & Silnitsky 1969, Shibatani & Pardeshi 2002, Hemmings 2013 for Javanese, Austin 2005 for Australian Aboriginal languages, Lobben 2010 for Hausa and other Afroasiatic languages)

**Analysis** Following Legate (2010), Bruening (2013) we assume that passives are built on the basis of Pass head which embeds a  $v$ P. A causative head can embed a  $v$ P or a  $\sqrt{P}$  (Pylkkänen 2002, Harley 2006). Crucially we assume that the corresponding Analytic and Synthetic structures have the same underlying structure. Building on Bobaljik (2012), we argue that synthetic structures involve an additional operation which merges the Pass/Caus head with the head of its complement. This operation derives a unique head which inherits the features of both and therefore it can acquire different interpretations depending on these features (2b).

(2) a. *Analytic Causative/Passive*



b. *Synthetic Causative/Passive*



To illustrate, consider the analytic passive in English (3a) vs. the synthetic one (4a) in Greek of the verb *wash*, which is considered to be naturally reflexive verb in both languages. In the analytic passive, the  $v$ P is spelled-out (3b) and then the *Pass* (3c) applies to existentially bind the

external argument introduced by *v* (Legate 2010, Bruening 2013). The derived meaning is that *there is an agent x s.t. x is the agent of the washing event e and John is the theme of e* (4d).

- (3) a. John<sub>i</sub> [<sub>PassP</sub> was [<sub>vP</sub> washed t<sub>i</sub>]].  
 b.  $\llbracket vP \rrbracket = \lambda x. \lambda e_s. \text{wash}(e) \ \& \ \text{theme}(e) = \text{John} \ \& \ \text{Agent}(e) = x$   
 c.  $\llbracket Pass \rrbracket = \lambda P_{\langle e, st \rangle}. \lambda e_s. \exists x. P(x, e)$   
 d.  $\llbracket PassP \rrbracket = \lambda e_s. \exists x. \text{wash}(e) \ \& \ \text{theme}(e) = \text{John} \ \& \ \text{Agent}(e) = x$

On the contrary, in Greek, the two heads *v* & *Pass* merge into one and the meaning derived can be Passive (*v<sub>Pass</sub>*), introducing an existentially bound external argument (4b) or Reflexive (*v<sub>Refl</sub>*) (4c), depending on whether the verb enters the derivation as reflexive or not:

- (4) a. O Gianis<sub>i</sub> [<sub>v<sub>PassP</sub></sub> pli-thi-ke t<sub>i</sub>].  
       John                  wash-PASS.PAST.3SG  
 b. *Pass*-M: ‘John was washed.’       $\sim \llbracket v_{Pass} \rrbracket = \lambda f_{\langle s, t \rangle}. \lambda e_s. \exists x. f(e) \ \& \ \text{Agent}(e) = x$   
 c. *Refl*-M: ‘John washed himself.’       $\sim \llbracket v_{Refl} \rrbracket = \lambda f_{\langle s, t \rangle}. \lambda e_s. f(e) \ \& \ \text{Agent}(e) = \text{theme}(e)$

By the same reasoning, we can also explain the other readings evoked by Middle Voice. A parallel distinction is drawn between analytic and synthetic causatives. In analytic causatives, such as the infinitival *faire* construction in Italian (5) the causative head is merged above *vP* and introduces a causing event and a causer argument (Pylkkänen 2002, Folli & Harley 2007, Campanini & Pitteroff 2012).

- (5) Je [<sub>CausP</sub> ferai [<sub>vP</sub> quitter la maison à Jean]].  
       I          will.make      leave the house to John  
       ‘I will make Jean leave the house.’ [Folli & Harley 2007; 200]

In synthetic causatives, the *Caus* and *v*-head merge into one head, thus allowing the derived head to function as a causative or as an Applicative depending on the properties of the verb. For example, in Kalkatungu and in other Australian Aboriginal Languages, the same suffix *-nti* gives rise to a causative interpretation when added to an unaccusative verb (6a) or an applicative (i.e. comitative) (6b) when it combines with an unergative verb (Austin 2005).

- (6) a. *ara* ‘enter’ → *ara-nti* ‘insert’      *Causative*  
       b. *thuna* ‘run’ → *thuna-nti* ‘run with (something)’      *Applicative*

The correlation between Applicatives and Causatives goes back at least to Marantz (1993). The present account comes to explain why this correlation is observed only in synthetic but not in analytic structures. The merger of the two heads in the case of synthetic causatives allows the formation of a *v<sub>Caus</sub>* or a *v<sub>Appl</sub>* depending on the properties of the verb. Notice that for the Applicative reading to emerge it is not necessary that the morpheme attaches directly to the root (cf. Marantz 2007, Harley 2006) as an antipassive morpheme can intervene (Austin 2005).

**Summary** The observed contrast between synthetic and analytic morphology is explained based on the idea of Morphological merger due to synthetic morphology which subsequently leads to Phase-Extension/Suspension (Bobaljik 2012, Bobaljik & Wurmbrand 2013, den Dikken 2006). At the same time, the syncretism observed in the domain of synthetic passives and causatives receives an immediate explanation since a suffix occupies the same syntactic position and its function is determined by the properties of its complement. By this reasoning, it should be possible to find languages which share the same morphology in Passives and Causatives since the relevant head can merge in the same position. Indeed this is the case in Korean where the same morpheme can appear in Passive-Middle and Causative constructions (Yeon 1991).

## Nominal Appositives as Speech Acts

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This talk develops an analysis of non-restrictive nominal appositives (NAPs) as independent speech acts that are discursively (but not syntactically) connected to their host sentences. I propose that NAPs are elliptical term answers to *potential questions* (PQs) licensed by the host sentence. To illustrate, the NAP *Peter* in (1) corresponds to (1c), which answers the PQ in (1b), licensed by the host (1a); the NAP *a friend of mine* in (2) corresponds to (2c), which answers a PQ about the referent of its anchor *Peter* (2b), introduced by the host (2a).

- (1) A friend of mine, *Peter*, danced last night.      (2) *Peter, a friend of mine*, danced last night.  
a. A friend of mine danced last night.                      a. Peter danced last night.  
b. Which friend of yours danced last night?              b. Who is Peter?  
c. *Peter* ~~danced last night~~.                                      c. ~~He is~~ *a friend of mine*.

Accordingly, I refer to NAPs such as (1) that answer a PQ which reformulates the host as *reformulating NAPs* (R-NAPs) and to NAPs such as (2) that answer a property-requesting PQ as *copular NAPs* (C-NAPs). Simplifying slightly, I follow Onea (2016) in assuming that a PQ  $\phi$  is licensed by an utterance  $\alpha$  in a given discourse state  $D$  iff  $\phi$ 's presuppositions are not satisfied in  $D$  but are satisfied in  $D + \alpha$ . For example, (1a) licenses (1b) because (1b) presupposes exactly the information conveyed by (1a). Similarly, (2a) licenses (2b) by providing the DP *Peter*, which presupposes existence and/or familiarity of its referent.

Ellipsis in NAPs is licensed under question/answer congruence (Rooth 1992). For example, the licensed PQ (1b) denotes a set of possible answers (3); any answer that is an element of this set will then permit deletion up to F-marking (Reich 2007). Hence, the fragment *Peter* in (1) can only be resolved as (4a), but not as (4b) or any other sentence that fails to reformulate the host.

- (3) [[Which friend of yours danced last night?]]                      (4) a. ~~Peter<sub>F</sub> danced last night~~.  
= {Mary danced last night, Peter danced last night, ...}                      b. ~~Peter<sub>F</sub> ate popcorn yesterday~~.

*Mutatis mutandis* for the NAP in (2), which is resolved against the PQ in (2b). This analysis directly and straightforwardly predicts the *prima facie* surprising fact, visible in languages like German, that R-NAPs match their anchors in case (5a), whereas C-NAPs bear invariant nominative case (Heringa 2012). In both cases, the case of the NAP necessarily matches the case of the *wh*-phrase in the PQ addressed by the congruent answer underlying the NAP.

As answers to PQs, NAPs are independent speech acts (SAs); this correlates with their status as syntactically independent, elliptical root clauses. As such, they are correctly predicted to be opaque to syntactic dependencies (scope, binding, extraction, agreement) from within the host (Ott 2015), and to be truth-functionally independent of the latter (Potts 2005). As SAs, NAPs can contain illocutionary modifiers such as sentence adverbs and modal particles (5a), whose scope is then restricted to the NAP. Furthermore, NAPs can differ in illocutionary force from their host sentence (5b,c), highlighting their status as independent SAs (Acuña-Farina 1999).

- (5) a. Sie hat einen Freund, *angeblich wohl den Peter*, in der Stadt getroffen. (German)  
she has a.ACC friend allegedly PRT the.ACC Peter in the city met  
“She met a friend, allegedly Peter, in the city.”

- b. Is Jane, *the best doctor in town*, already married?      c. ~~She is~~ [the best doctor in town]<sub>F</sub>.

Prosodic properties of NAPs further corroborate this analysis (cf. Truckenbrodt 2014). NAP and host are strictly independent stress domains, i.e. each must realize sentence stress. This shows

that NAPs are intonation phrases (IPs); given that, on my analysis, they are root clauses, this need not be stipulated but follows on standard assumptions about the syntax—prosody mapping (e.g. Selkirk’s 2011 MATCH(Clause,*t*)). Since NAP interpolation causes the prosodic disruption of the host, each of the resulting prosodic units must form an independent IP. This explains the prosodic separation (“comma intonation”) of NAPs and constrains their interpolation, which is infelicitous whenever it gives rise to free-floating prosodically weak elements ((6a) vs. (6b,c)).

- (6) a. ??(I called a FRIEND)<sub>IP</sub>, (PETER)<sub>IP</sub>, (up)??.  
 b. (I called up a FRIEND)<sub>IP</sub> (PETER)<sub>IP</sub>.  
 c. (I called up a FRIEND)<sub>IP</sub> (PETER)<sub>IP</sub> (right after BREAKfast)<sub>IP</sub>.

Since NAPs, being root clauses, are independently computed expressions, their external distribution is constrained by general discourse-pragmatic principles alone. This leads to an apparent paradox, since implicit questions are not generally assumed to license elliptical answers. I suggest, however, that NAPs are licit only in environments in which the PQ they address can be safely accommodated even on the basis of a fragment answer, given the congruence of questions and felicitous answers as well as further cues. One important factor is the incremental licensing of PQs, which is reflected in constraints on the linear interpolation of NAPs. As illustrated in (7), the positioning of NAPs is flexible but not unconstrained: the R-NAP in (7b) can either follow its host sentence (as an ‘afterthought,’ ✓<sub>3</sub>), its XP-anchor (✓<sub>1</sub>), or the anchor’s minimal clause (✓<sub>2</sub>); but it cannot surface right-adjacent to some unrelated anchor (✗<sub>3</sub>).

- (7) a. Ich ✗<sub>1</sub> habe ✗<sub>2</sub> einen Freund ✓<sub>1</sub> gebeten ✓<sub>2</sub> die Akten ✗<sub>3</sub> zu vernichten. ✓<sub>3</sub> (German)  
 I have a.ACC friend asked the files to destroy  
 b. Ich habe [den Peter]<sub>F</sub> ~~gebeten die Akten zu vernichten.~~  
 I have ACC Peter asked the files to destroy ‘I asked Peter to destroy the files.’

To explain this behavior, I argue that PQs are licensed incrementally in the left-to-right processing of utterances. Before the host is processed in its entirety, missing material required for propositional interpretation is considered existentially closed, thereby licensing questions of higher generality than the eventual, fully specific PQ. NAPs can then be felicitously interpolated where a relevant PQ is licensed and salient (and prosodic prerequisites are met, recall (6)). This is illustrated for (7) in (8) below (A = answer). No PQ that could be answered by (7b) can be accommodated before its anchor is introduced in discourse (8a); hence, ✗<sub>1</sub> and ✗<sub>2</sub> are illicit interpolation positions. By contrast, the NAP is licit at position ✓<sub>3</sub>, where a fully specific reformulating PQ is licensed (not shown below). Similarly, the NAP is licit at any prior point at which a more general PQ is licensed that could be answered by the NAP (✓<sub>1</sub> = (8b), ✓<sub>2</sub> = (8c)). Finally, at ✗<sub>3</sub> the most salient PQs concern *die Akten* ‘the files,’ which (7b) cannot answer (8d).

- (8) a. Ich (habe)... → PQ: ... → A: #(8b) ✗<sub>1/2</sub>  
 b. Ich habe einen Freund... → PQ: ∃x:which friend did you x<sub>VP</sub>? → A: (8b) ✓<sub>□</sub>  
 c. Ich habe einen Freund gebeten... → PQ: ∃x:which friend did you ask x<sub>CP</sub>? → A: (8b) ✓<sub>□</sub>  
 d. Ich habe einen Freund gebeten, die Akten... → PQ: ... → A: #(8b) ✗<sub>4</sub>

My analysis of NAPs as SAs thus captures their syntactic, prosodic and semantic autonomy, as well as their felicity and positioning relative to their hosts and anchors, given independently motivated assumptions about the licensing of PQs and question/answer congruence.

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## Overt movement of comparative quantifiers in European French

**1. The problem** In French nominal comparatives, degree words (*plus* ‘more’, *davantage* ‘more’, *moins* ‘less’ and *autant* ‘as much/many’) can appear close to the noun that is being compared (1*a*) or farther to the left of the verb (1*b*), a construction which I refer to as CAD. The NP being compared is marked with the particle *d(e)* (from now on *deP*). The central question this paper is concerned with is whether the sentences in (1*a*) and (1*b*), CAD, are derivationally related. CAD resembles a construction known as Quantification At a Distance (QAD) (2*b*). In the literature, CAD is assumed to be a subcase of QAD.

(1)*a*J’ ai bu plus d’ eau que de vin. (2)*a*J’ ai écrit beaucoup de lettres.

I have drunk more DE water than DE wine I have written many DE letters

*I drank more water than wine.*

*I wrote a lot of letters.*

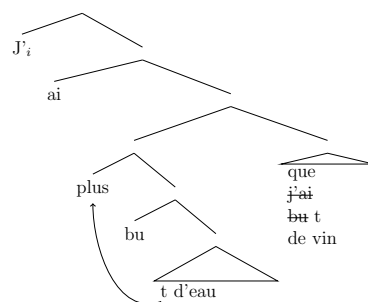
*b*J’ ai plus bu d’ eau que de vin.

*b*J’ ai beaucoup écrit de lettres.

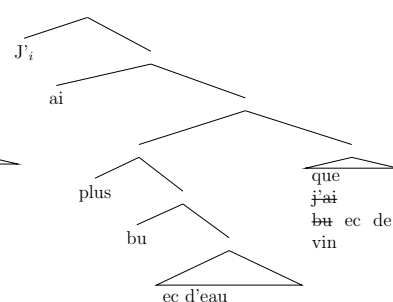
Two kinds of analyses could derive the dependency between the operator and *deP*. Under a movement analysis, the quantifier is base-generated next to *deP* and can move overtly to a preverbal position, whereas under a base-generation (BG) analysis, the quantifier is base-generated in the position where it is pronounced, and a dependency is established between the operator and an empty

category (ec). I consider CAD independently, and provide evidence that (1*b*) is derived from (1*a*) via movement. I also show that the arguments that have been given to argue in favor of the base-generation hypothesis for QAD either do not apply to CAD, or do not go through. I propose an analysis in which the movement of *plus* in (1*b*) is the overt manifestation of the covert movement proposed by Heim (2001) to occur with degree operators.

(a) Movement analysis of 1*b*



(b) Adverbial/BG analysis of 2*b*



## 2. Evidence for movement

**Locality restrictions.** As expected from the hypothesis that the CAD operator - *deP* dependency is obtained via movement, this dependency is sensitive to interveners that other dependencies created by movement are: tensed clauses and extraction islands (e.g. purpose clauses (PC)). **Intervention effects.** CAD operators cannot move over DP's (3*b*) or adverbials (4*b*). Cliticizing the DP (3*c*), moving it (3*d*), or moving the adverb (4*c*) from the position in-between *plus* and *deP* makes the sentence better.

(3) CAD across DP *Paul*: \*

*a*Marie a supplié Paul d' acheter plus de magazines que de journaux.

Marie has begged Paul to buy more de magazines than de newspapers

*Marie begged Paul to buy more magazines than newspapers.*

*b*\* Marie a plus supplié Paul d'acheter de magazines que de journaux.

*c*Marie l' a plus supplié d' acheter de magazines que de journaux.

*d*Qui est-ce que Marie a plus supplié d'acheter de magazines que de journaux ?

(4) CAD across adverbial à *chaque fois*: \*

*Each time, it seemed to me that I borrowed more money than you did.*

**c**A chaque fois, il m'a *plus* semblé avoir emprunté d'argent que toi.

**Degree words can reconstruct** Another argument for the movement analysis is that CAD operators are not always interpreted where they are pronounced. Crucially, they can be interpreted below the position they appear in (5*b*).

Your children go less must send de lettres than this

Max{d |  $\forall w' \in \text{Acc}(w)$  Your children are going to send d-MANY letters in  $w'$ } < 50  
 $\approx$  The minimum number of letters that the children are required to send is less than 50. (no upper end, they are allowed to send more than 50 letters.)

$$\forall w' \in \text{Acc}(w) \text{ Max}\{d \mid \text{Your children are going to send } d\text{-MANY letters in } w'\} < 50$$

$\approx$  The max. number of letters that the children are allowed to send is less than 50.

(6) **aBG** structure at LF: moins<sub>i</sub> [ devoir [ ec<sub>i</sub> de lettres ] ]

2 interpretations

2 interpretations

Figure 2: Spell-out of (5)

2

### The locality of dependent case

**Background:** According to Dependent Case Theory (DCT), structural case is defined relationally between two DPs, rather than between a DP and a designated functional head (e.g. Marantz 1991; McFadden 2004; Bobaljik 2008; Preminger 2014; Baker 2015). The core tenet of DCT is that accusative and ergative are manifestations of *dependent case* (DC). Setting aside lexical case, the case calculus proceeds as follows: (i) If DP<sub>1</sub> c-commands DP<sub>2</sub> within the same clause, assign DC either to DP<sub>1</sub> (= “ergative”) or to DP<sub>2</sub> (= “accusative”); this directionality is parameterised per language. (ii) If a DP has not yet been assigned case by Spellout, assign it nominative.

**Problem:** Clausematehood is insufficient to account for the observed locality of DC assignment, in particular with respect to movement. While some movement may feed DC assignment, e.g. raising-to-object in Sakha (1), other movement crucially must not, e.g. *wh*-movement (2). Solid lines represent movement, and dashed lines represent DC assignment.

- (1) Min **ehigi(-ni)** [bügün **ehigi** kyaj-yax-xyt dien] erem-mit-im (Sakha)  
I.NOM you -ACC today win-FUT-2PL.SUBJ that hope-PRT-1SG.SUBJ  
‘I hoped that you would win today’ [Baker & Vinokurova 2010]
- (2) Who(\*m) did John say [<sub>CP</sub> **who** Mary believed [<sub>CP</sub> **who** saw Sue ] ]?

In (1), raising of the embedded subject into the matrix clause feeds DC assignment to the raised subject (Baker & Vinokurova 2010). The same pattern can be observed for ergative in languages where object shift feeds ergative case assignment (Woolford 2015). In (2), *who* successive-cyclically *wh*-moves, but does not alter case or have its own case altered from its intermediate and final landing sites. (Successive-cyclic movement through [Spec, vP] is set aside here due to space.) The standard solution to the dichotomy in (1) and (2) is to stipulate that  $\bar{A}$ -movement cannot feed DC assignment. This paper seeks to derive such a locality constraint.

**Claim:** Based on evidence from Finnish, this paper proposes that the set of positions to which a DP can assign DC is a function of its syntactic position: DP<sub>1</sub> which is sister to X<sup>0</sup> cannot license DC on DP<sub>2</sub> across a projection of Y<sup>0</sup>, where Y<sup>0</sup> is higher than X<sup>0</sup> in the functional sequence. This locality constraint is an extension of the Williams Cycle (Williams 1974, 2003).

**Case in Finnish:** (3a) shows that a matrix subject can assign DC to an embedded object across a nonfinite clause boundary (i.e. TP). In the absence of a matrix subject, e.g. in imperatives and passives, nothing assigns DC to the embedded object and it surfaces with nominative (3b).

- (3) a. **Hän** läht-i [TP avaa-ma-an **ove-n** ] NOM-ACC  
s/he.NOM leave-PAST.3SG open-INF-ILL door-ACC  
‘S/he left to open the door’
- b. Lähde [TP avaa-ma-an **ovi** ]! NOM  
leave.IMP open-INF-ILL door.NOM  
‘S/he left to open the door’

The interesting pattern emerges when the matrix clause has its own object. As expected, the matrix subject is able to assign DC to both the matrix and embedded objects (4a). However, in the absence of a matrix subject, *both objects* surface with nominative (4b).

- (4) a. **Hän** pakott-i **lapse-n** [TP avaa-ma-an **ove-n** ] NOM-ACC-ACC  
s/he.NOM force-PAST.3SG child-ACC open-INF-ILL door-ACC  
‘S/he force the child to open the door’

- b. Pakota    **lapsi**    [TP avaa-ma-an    **ovi** ]!    NOM–NOM  
 force.IMP child.NOM    open-INF-ILL door.NOM  
 ‘Force the child to open the door!’    [Nelson 1998:238]

(4) shows that while the matrix subject can assign DC across an embedded TP, a matrix object crucially cannot. We will argue that the restriction explaining (4) extends to (1) and (2).

**Proposal:** For concreteness, we will adopt the syntactic implementation of DCT from Preminger (2014): DPs enter the derivation with an unvalued [*u*-CASE] feature. This can be valued as either DC or a lexical case. DC is assigned whenever two DPs with unvalued [*u*-CASE] stand in a c-command relationship; the realisation as accusative or ergative is handled in the morphology. Lexical cases are assigned locally by lexical heads, e.g. P<sup>0</sup> and V<sup>0</sup>, to their sister. If [*u*-CASE] remains unvalued at Spellout, it is realised as nominative case in the morphology.

- (5) [DP<sub>[*u*-CASE]</sub> ... [ ... DP<sub>[*u*-CASE]</sub> ]]  $\rightsquigarrow$  [DP<sub>[*u*-CASE]</sub> ... [ ... DP<sub>[DEP-CASE]</sub> ]]  $\rightsquigarrow_{PF}$  DP<sub>NOM</sub> ... DP<sub>ACC</sub>

We propose that DC assignment is subject to the locality constraint in (6), which is a direct extension of the Williams Cycle as formulated in Williams (2003).

- (6) Given a Pollock/Cinque-style clausal structure  $fseq = \langle X_1 > X_2 > \dots > X_n \rangle$ , where  $X_i$  takes  $X_{i+1}P$  as its complement, DC assignment spanning a matrix and an embedded clause cannot target a DP<sub>1</sub> in a projection of  $X_j$  in the embedded clause and a DP<sub>2</sub> in a projection of  $X_i$  in the matrix clause, where  $X_j > X_i$  in  $fseq$ .

(6) states barrierhood for DC assignment relative to the syntactic position of the higher DP in the pair, defined in terms of the functional sequence (*fseq*). For example, a DP in [Spec, TP] can assign DC past T<sup>0</sup>, v<sup>0</sup>, and V<sup>0</sup>, all of which are lower or equal to T<sup>0</sup> in *fseq*, but not past C<sup>0</sup> because C<sup>0</sup> > T<sup>0</sup>. In (4a), the matrix subject can penetrate the embedded TP because T<sup>0</sup> is not higher than itself in *fseq*. Thus, it assigns DC to both the matrix and embedded objects. However, in (4b), the matrix object from its vP-internal position cannot penetrate the embedded TP because T<sup>0</sup> > v<sup>0</sup>, which prevents it from assigning DC to the embedded object. Therefore, the [*u*-CASE] features on both DPs remain unvalued at Spellout and are realised as nominative. These patterns are schematised in (7). With respect to movement, (6) crucially prohibits a DP in [Spec, vP] or [Spec, TP] from assigning DC to a DP in [Spec, CP] (8). This accounts for why a *wh*-element’s case is not overwritten at its intermediate landing sites (2). Movement is allowed to feed DC assignment in (1) because the matrix object position to which the embedded subject raises is lower than T<sup>0</sup> in *fseq*, the subject thus assigning DC case from [Spec, TP].

- (7) [TP DP<sub>1</sub> T<sup>0</sup> [vP DP<sub>2</sub> v<sup>0</sup> [VP V<sup>0</sup> [TP DP<sub>3</sub> ... ]]]] ... (8) [TP DP<sub>1</sub> ... [vP DP<sub>2</sub> ... [CP *wh*-DP<sub>3</sub> ... ]]]

DC assignment is still subject to the PIC. The strong PIC (Chomsky 2000) prevents a *wh*-element from assigning of DC from its intermediate and final landing sites because the phase complement will have already undergone Spellout before the DC assignment can probe the structure.

**Implications:** (6) is a direct extension of the Williams Cycle (WC), which regulates possible movement derivations in terms of *fseq* (Williams 1974, 2003). Its original purpose was to account for *improper movement*: the ungrammaticality of movement from an  $\bar{A}$ -position to an A-position, e.g. \**John<sub>1</sub> seemed t<sub>1</sub> that t<sub>1</sub> is happy*. According to the WC, moving from [Spec, CP] to [Spec, TP] is barred because C<sup>0</sup> > T<sup>0</sup>. Müller (2014) observes that the WC generalises to other movement types, such as topicalisation, relativisation, and scrambling (also Abels 2007). Keine (2015) further observes that the WC generalises to the locality of long-distance agreement (LDA), where the embedded clause’s size dictates whether LDA obtains. Therefore, this paper shows that the WC, observed for both movement and agreement, extends to case as well.

## Intonational encoding of epistemic operations across speech acts: Commitment and Agreements operators

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Even though intonation has been traditionally claimed to be an indicator of the epistemic commitments of the participants in a discourse, very few empirical investigations have addressed specific semantic hypotheses related to the precise semantic dynamic contribution of question and statement intonation to utterance interpretation. In this talk, I will provide a set of empirical arguments showing that different types of statement and question intonation contours across languages encode different levels of ASSERT (commitment) and REJECT ((dis)agreement) epistemic operators. First, I will show crosslinguistic data from typologically diverse languages as supporting evidence that sentence-final discourse particles across languages (a) encode similar meanings to those intonation encodes; and (b) encode the specification of dynamic epistemic commitments in two complementary directions, i.e., speaker commitments to the speaker's own proposition and speaker agreement with the addressee's propositions (e.g., different degrees of the ASSERT and REJECT operators). Second, the results of two empirical studies will be presented that further support this view. The first study will show results from a recent perception experiment showing that different types of biased QUESTION intonation in Catalan encode fine-grained information about the epistemic stance of the speaker, not only in relation to the speaker's own propositions but also in relation to the addressee's propositions or to contextual information. A total of 119 Central Catalan listeners participated in an acceptability judgment task and were asked to rate the perceived degree of acceptability between a set of interrogative utterances (variously produced with one of four intonational contours) and their previous discourse context (which was controlled for epistemic bias). We found that participants preferred some question intonation contours over others in the six types of epistemic contexts (e.g., three degrees of speaker commitment and three degrees of speaker agreement), revealing an epistemic specialization of intonation contours in this language. The second study will show the results of a recent production experiment comparing two languages within the Romance group (Catalan and Friulian) which have been reported to use intonation and sentence particles to different extents to mark epistemic meanings. A total of 15 speakers per language were asked to participate in a Discourse Completion Task designed to elicit statements with two degrees of speaker commitment and agreement properties. The results showed that (a) Catalan encodes speaker commitment and speaker agreement in STATEMENTS through a different set of intonation contours; and (b) Catalan and Friulian display an asymmetry in the marking of epistemically-biased statements: while Catalan uses a greater variety of stance-marking intonation contours, Friulian uses a more varied set of stance modal particles and a more restricted set of intonation contours. Overall, I will claim that (a) intonation across languages encode commitment and agreement operators across two different speech acts, namely questions and statements; and (b) that dynamic semantic models enable us to integrate the study of intonational meaning with other parts of the grammar into a unified approach.

### Perspectivisation by evidential markers and quotation

Quotation is the presentation of a speech act, whose content can be integrated in the discourse in different ways: it can be reported by literal reproduction in a direct (verbatim) quotation, cf. (1a), it can be reported via (free) indirect discourse, or it can be reported by just conveying the general meaning of what was said.

(1a) *John said “Doing linguistics is easy.”*

Evidentiality, on the other hand, is commonly known as the encoding of an utterance by the indication of the “source of the information” contained in the proposition (cf. Aikhenvald 2004:3). The subtype of indirect – or reportative – evidentiality can be further classified into second-hand knowledge, where the provider of the reported information is known, third-hand knowledge, with no indication of the exact source of information, and folklore or generic knowledge (cf. Willett 1988 and Palmer 2001). Some languages have evidential grammatical markers proper (e.g. Quechua), whereas others encode this function by (mostly lexical) “evidential strategies” (cf. Aikhenvald 2004) like the adverb *reportedly* in (1b).

(1b) *Reportedly doing linguistics is easy.*

Although reportative evidentiality and quotative marking must be clearly kept distinct (as e.g. Extepare 2010 shows), they have things in common: both can involve lexical expressions of saying and reporting (GUVs – General Utterance Verbs, cf. Jäger 2010); both concern more than one speech act, cf. also Jakobson (1957) and his definition of evidential as “a tentative label for the verbal category which takes into account three events – a narrated event, a speech event, and a narrated speech event (Ens), namely the alleged source of information about the narrated event”; and both put into perspective the content of an assertion, either by making its source explicit or by indicating that it is different from the current speaker. In fact, there are areas where evidential and quotative strategies overlap (similar to the blurred boundaries between epistemic modality and inferential evidentiality), cf. (2) from Latin American Spanish, where the same lexical element *dizque* (< *dice que* 'says that') is used as an evidential (2a) and quotative marker (2b):

(2a) LAsp. *Juan **dizque** estaba enfermo.*  
'Allegedly [=SAYSTHAT], John was ill.'

(2b) LAsp. *Se supo che un de grupo realizadores venezolanos [...] rechazó la participación de Fanny Mickey en el papel protagónico **dizque** “porque no era prenda de garantía.”*  
'It came out that a group of directors from Venezuela [...] refused the participation of Fanny Mickey in the role of the protagonist SAYSTHAT “because she was not a warranty card“.' (CREA – *El Tiempo*, Colombia, 1987)

Parallel to the SAYSTHAT marker, in many Romance varieties, there is also a SAYS marker, i.e. an adverb without integrated complementiser, which can encode varying types of reported evidentiality. For colloquial Italian, for example (but this is probably not the case in Spanish), Cruschina (2011:106f) claims that a distinction can be made between *dice che* for indirect

speech and hearsay and (invariable) *dice*, used for direct quotation, cf. (3) (where the first person pronoun is an indicator of quoted discourse):

- (6) It. *Dice* ... c' era una ragazza m' ha detto *dice* guarda io...  
SAYS there was a girl me she-has said SAYS look I  
'SAYS, there was a girl she said to me, SAYS look I...' (Lorenzetti 2002:211)

Furthermore, there are cases, not rare in the languages of the world (cf. Klammer 2000), where the complementizer that introduces the complement of a verb of saying can be used as a stand-alone quotative marker, cf. (4):

- (4) Sp. *Si viene mi madre, que el tabaco es tuyo.* (Etxepare 2010)  
if comes my mother THAT the tobacco is yours  
'If my mother comes (tell her) that the tobacco is yours.'

Evidential and quotative markers of the type SAYS THAT, SAYS and THAT thus represent a good piece of evidence for the necessity to distinguish between different types of perspectivised narration. The polyfunctionality of these elements renders them an ideal empirical touch-stone to observe the interaction of semantics and pragmatics at the interface.

The aim of my talk is to show how the syntax and semantics of several quotative and reportative evidential strategies can be described with the help of data stemming mainly, but not only, from Romance. I will offer a fine-grained taxonomy concerning their semantic and pragmatic features, in order to come to a better understanding of how quotation and evidential marking (and hybrid manifestations of both) are integrated into discourse giving rise to perspectivisation phenomena. One of my claims will be that the elements at issue introduce a model of reported speech (cf. Quer 1998) with a variable as an individual anchor (this is the semantic part). In contrast to canonical GUVs, where a subject is part of the thematic frame and thus the variable is satisfied syntactically, with the elements discussed here the instantiation of the variable depends on the context (this is the pragmatic part). The different degrees of perspectivisation arising from the interplay of grammar and discourse thus depend on grammatical means, semantic structures and, when the latter are underspecified, pragmatic contextualisation.

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## A Conjunctive Disjunction in Japanese

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Kuno (1973) and others describe the Japanese junctor *ya* as conjunction. But, Sudo (2014) analyzes *ya* as a disjunction with a conjunctive implicature. We compare *ya* with other junctors and implicature triggers experimentally using mouse-tracking. Our two main results are: 1) *ya* differs from lexical conjunctions corroborating Sudo's (2014) proposal. 2) The time-course of the conjunctive implicature of *ya* argues against the details of Sudo's (2014) implementation, and instead favors an account similar to other cases of conjunctive implicatures (e.g. Singh et al. 2015).

**Background:** In example (1), *ya* like the other NP-conjunctions of Japanese *mo* and *to* (and unlike the disjunction *ka*) triggers the conjunctive inference that Taro drank coffee **and** tea.

- (1) Tarou-wa kouchii {*ya* / *to* / *mo* / *ka*} koucha-o nonda  
Taro-TOP coffee YA / and / and / or tea-ACC drank

But, Sudo (2014) points out that *ya* in (2) and other examples, where *ya* is embedded in a downward entailing environment. In (2), *ya* unlike *to* and *mo* has a disjunctive interpretation.

- (2) [Tarou-ga kouchii *ya* koucha-o nom-eba] yoru nemur-e-nai darou  
[Taro-NOM coffee YA tea-ACC drink-if] night sleep-can-NEG INFER

‘If Taro drinks coffee **or** tea, he won’t be able to sleep at night.’

Sudo proposes that its conventional meaning is disjunction  $\vee$ , and that *ya* triggers a conjunctive implicature in (1). In downward entailing environments where implicatures are blocked, the disjunctive interpretation is apparent. To derive the conjunctive implicature, Sudo proposes that the other disjunction *ka* is a scalar alternative of *ya*, and that implicatures are computed recursively for *ya*. Then, since *ka* triggers an anti-conjunctive (not both) implicature, the conjunctive implicature for *ya* is predicted.

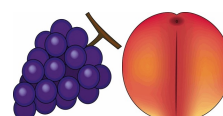
**Methods:** We compared the conjunctive inference of *ya* with logical content and scalar implicatures with mouse-tracking. We showed single Japanese sentences such as in (3a) on the screen for 2 seconds. Then subjects saw a two-image picture (as in (3a)) and had to decide whether the sentence-picture correspondence was good or bad (a forced choice decision task). The ‘good’/‘bad’ response buttons were located in opposite corners of the screen (left/right counterbalanced across participants). Participants had to move the mouse from an initial position at the bottom center of the screen. The experiment included 8 items of condition *ya*1 like (3a) and 4 each of condition *mo*1 and *to*1 like (3b). For all three, the expected response was ‘bad’ because of the conjunctive inference of *ya*, *mo* and *to*.

- (3) a. *ya*1: kuma-*ya* gorira-ga imasu.  
bear-YA gorilla-NOM exist  
‘There’re a bear YA a gorilla.’  
b. *mo/to*1: kuma-*mo* gorira-*mo* imasu. / kuma-*to* gorira-ga imasu.  
bear-AND gorilla-AND exist / bear-AND gorilla-NOM exist  
‘There’re a bear and a gorilla.’



We also compared the conjunctive inference of *ya* with two other implicatures: the anti-conjunctive implicature of the disjunction *ka* and the upper bound implicature of the numeral *one*. 16 items of condition *ka*2 in (4a), and 4 item of condition *one*2 in (4b) tested these.

- (4) a. *ka*2: budo-*ka* momo-(*ka*)-ga arimasu.  
grape-or peach-or-NOM exist  
‘There’re grapes or a peach.’



b. one2: hebi-ga ip-piki imasu.  
 snake-NOM one-CL exist  
 ‘There’s one snake.’



In addition, the experiment contained 164 controls and filler items. Data from 67 native Japanese speakers were recorded with the Mousetracker software (Freeman and Ambady 2010). Each participant saw 200 items in total and took about 25 minutes per participant.

**Results:** Overall accuracy on controls and fillers was 97%. Our data show a clear difference between *ya* and the lexical conjunctions *to* and *mo* in response accuracy, reaction times, and mouse tracks. Accuracy: For *to1* and *mo1*, accuracy was 95%, but for *ya1* significantly lower at 75%. Reaction times: For *to1* and *mo1*, mean reaction time of correct responses was 1743 ms, while it was significantly longer (2037 ms) for *ya1*. Mouse tracks: Figure 1a compares mouse movements towards the correct ‘bad’ response (always shown on the right, but for half of the subjects was actually on the left) with individual tracks in light red/blue and means as the dotted lines. The mouse paths for *ya1* diverge more from the straight line to the target as shown by a significant difference in the area-under-the-curve (AUC). The difference between *ya1* on the one hand and *mo1* and *to1* on the other argues against an analysis of *ya* as a lexical conjunction and corroborates the implicature proposal of Sudo (2014).

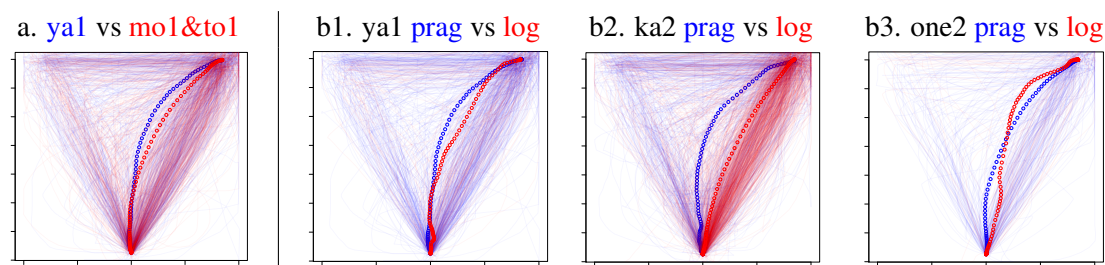


Figure 1: *Mousetracks: a. ya vs. coordinations, b. logical (red) vs pragmatic (blue) responders*

However, our further results don’t support the Sudo’s implementation of the implicature analysis. His account predicts that *ya1* should pattern with *ka2*. This is not what we find: the implicature rates for *ka2* (34%) is significantly lower than for *ya1* (75%). The comparison of mouse tracks of the logical and pragmatic responders corroborates this picture: in *ka2*, there is a significant difference, but not in condition *ya1* (see figure 1b1 and 1b2). But, the implicature of cardinals (condition *one2*) is similar to *ya1* by both accuracy rate (80%) and mousetracks (figure 1bc). We performed a linear mixed model analysis of the area under the curve with fixed factors condition (*ya1*, *ka1*, *one2*) and response type (logical, pragmatic). The analysis confirms that the interaction between condition and response type for condition *one2* didn’t differ from that for *ya1* ( $t = 1.3, p = .201$ ), while the difference to the *ya1*-interaction is highly significant for conditions *ka2* ( $t = -4.1, p < .0001$ ).

**Discussion** We propose that *ya* has a purely disjunctive meaning, but in contrast to *ka* is not associated lexically with a conjunctive alternative. Therefore ‘A *ya* B’ only has the substring alternatives ‘A’ and ‘B’ as also proposed for *or-else*-disjunction in adult English (Meyer 2015), disjunction in child language (Singh et al. 2015), and adult Warlpiri (Bowler 2015). With recursive implicature computation, the conjunctive implicature is predicted from the substring alternatives. Namely the exhausted substring alternative amount to  $A \wedge \neg B$  and  $B \wedge \neg A$ . Therefore the second level exhaustivization of ‘A *ya* B’ =  $A \vee B$  yields  $(A \vee B) \wedge \neg(A \wedge \neg B) \wedge \neg(B \wedge \neg A)$ . This is equivalent to  $A \wedge B$ .

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**Agreement in Kinande:** The Bantu language of Kinande has been the archetype language used in support of upward Agree: the verb agrees with the c-commanding preverbal XP, regardless of whether or not it is the thematic subject. For example, the verb in Kinande agrees with the preverbal locative phrase in locative inversion constructions rather than with the postverbal thematic subject:

- Original data involving SCCs challenge the upward Agree generalization for Kinande. With SCCs, agreement is downward: the copula must agree in class (indicated by numbers) with the post-copular XP, the thematic subject.

(2)a. [ebyalya ebyo nyanzire kutsibu] <b>w'</b> amatimo 8food 8that I.like strongly 6COP 6bananas 'The food that I like best is bananas.'	b. émbugá <b>lô</b> lúhi 9problem 11COP 11war 'The problem is the WAR.'
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(3) a.  $[_{RP} XP_1] \quad [_{R'} COP(ula) \quad [_{XP_2} ]]$   
 b.  $[_{RP} [“bananas” XP_1]_{y-\varphi}] \quad [_{R'} COP_{y-\varphi} [“the food that I like best” XP_2]_j]$   
 c.  $COP_{y-\varphi} [_{RP} [“bananas”]_{y-\varphi}] \quad [_{R'} t_y [“the food that I like best”]_j]$   
 d.  $[_{TP} [“the food that I like best”]_i] \quad COP_{y-\varphi} [_{RP} [“bananas”]_{y-\varphi} [t_y \quad t_i]]$

(4) Omugalimu **ni/\*yo** Kambale  
The teacher is /\*1COP Kambale

Proper names can agree fully with the **yo** copula when they are overtly precopular. These sentences can occur in the same context as SCCs, but the focus is in initial position. I follow Hedberg & Schneider-Zioga 2015 and analyze them as *reversed* SCCs:

- (5) Kambale **yo** mugalimu  
 1Kambale 1is teacher

A similar upward versus downward agreement asymmetry exists for postcopular pronouns:

6a. ingye (* <b>ni</b> ) mwana {Null Copula} I child 'I am a/the child.'	6b. eprobleme <b>ni</b> ingye aug.9problem NI me 'The problem is <b>me</b> .'
<b>reversed SCC</b>	<b>SCC</b>

In (6a), a reversed SCC, where agreement is normally with the precopular focus, a null copular is required when a 1p (or 2p) pronoun is in initial position. In contrast, in SCCs (6b) where agreement is normally with the postcopular XP, the non-agreeing copula **ni** occurs with 1p (& 2p & 3p). (7) demonstrates for reverse SCCs that the 1 & 2p pronoun cannot stand in a precopular position and have **ni** as the copula. A 3p pronoun can be precopular with a **ni** copula, but the resulting sentence is interpreted predicationally, rather than as a reverse SCC:

first person	second person	third person
7a.*Ingye <b>ni</b> mugalimu I NI 1teacher	b.*Iwe <b>ni</b> mugalimu you.sg NI 1teacher	c. Iye <b>ni</b> mugalimu (s)he NI teacher (≠SCC)

If there were covert upward agreement as outlined in (3), we could not explain why there is an asymmetry in copula valuation when names and personal pronouns entered into post-versus pre-copular phi-agreement relations. These data are consistent with DA and provide evidence against *Upward Agree as a principle* of the grammar.

Bjorkman & Zeijlstra 2014, who allow for UA and under restricted circumstances DA, also cannot account for the Kinande data. Under their account, downward phi-agreement in Kinande would have to be tied to an additional unvalued feature such as Case. In Kinande apparent examples of UA are never tied to Case (see (1) and Baker 2008). Postcopular agreement in Kinande is tied to semantic focus: the agreed with XP in an SCC must always be interpreted as focused. However, focus cannot be the additional unvalued feature that allows for DA in Kinande. There are agreeing constructions elsewhere in the language that demonstrate that agreement and focus are dissociated.

Carstens' 2013 proposal of delayed valuation can successfully account for the Kinande data. She argues that valuation happens immediately when it can. This means Agree will initially be downward if the probe and goal are close enough since the derivation proceeds from the bottom up. I argue that the well-known cases (e.g.(1)) in Kinande show UA because the agreeing *probe* is located in a high position on the articulated left edge, (see Baker 2003, Henderson 2006, & Schneider-Zioga 2000, 2007 for relevant discussion). DA cannot take place upon merge then because the distance between *probe* on the left edge and a potential *goal* within vP is too great. Merge of the *goal* to a position where it c-commands the *agreeing* probe (UA) is both allowed and required for successful valuation in these cases. By contrast, SCCs in Kinande have less structure than sentences with theta-assigning verbs. In this case, DA can proceed derivationally as no relevant structure intervenes between the copular phi-*probe* and the postcopular external argument *goal* in SCCs. Work by van der Wal 2012 on agreement with in-situ subjects in Makhuwa and Matengo reveals the existence of DA in those Bantu languages. The prediction is that such Bantu languages systematically involve less structure when theta-assigning verbs are involved than a language like Kinande.

**Conclusion:** This paper argues that neither UA nor DA is a universal agreement mechanism. Instead, evidence exists for a direction-free approach to agreement. Furthermore, I demonstrate that the relatively minimal syntactic structure of copular sentences allows us to

formulate falsifiable hypotheses about the direction of Agree when maximally local agreement configurations are involved.

## The Syntax of Focus Association in German/Dutch: Evidence from Scope Reconstruction

Liz Smeets and Michael Wagner

Motivated by syntactic restrictions on the distribution of *nur* ‘only’ in German, Buring and Hartmann (2001) (B&H) argue that *nur*, similar to adverbs like *always*, is a **one-place sentential operator**, which adjoins exclusively to (extended) VP’s (see (1-a)). In this analysis *nur* never forms a constituent with a following focused DP, even in cases when they appear to occur together in the first position of a V<sub>2</sub> sentence. We use evidence from scope reconstruction to argue that focus-sensitive operators like *only* in German (and Dutch, all relevant judgments here work in both languages) can form a constituent with a focus constituent after all (see (1-b)). (All examples mark main prosodic prominence in bold where necessary. We alternate German and Dutch examples, the talk will include versions in both languages.).

The reconstruction debate. A crucial piece of evidence given in B&H in favor of the syntax in (1-a) is that reconstruction of [only + DP] is unavailable, contrary to what would be expected by the syntax in (1-b).

- (1) Nur Maria<sub>i</sub> liebt jeder t<sub>i</sub>.  
Only Mary.ACC loves everyone.NOM t<sub>i</sub>  
a. Buring & Hartmann (2001): [<sub>CP</sub> Nur [<sub>CP</sub> Maria [<sub>VP</sub> liebt jeder]]]  
b. Proposed here: [<sub>CP</sub> [Nur [Maria]] [<sub>VP</sub> liebt jeder]]  
**Surface Scope:** Mary is the only person such that everyone loves her.  
**Reconstruction Scope:** Everyone is such that they love only Mary (B&H: Unavailable)

Reis (2005) and Meyer and Sauerland (2009) observe that with certain quantifiers, reconstruction does appear to be available (see (2)). Meyer and Sauerland (2009) argue that since in (1) the reconstruction-scope reading entails the surface-scope reading, the ambiguity is **undetectable**, while in (2) the reconstruction scope reading is logically independent. This paper presents three novel arguments in favor of the possibility of reconstruction, and hence in favor of the possibility of the syntax in (1-b).

- (2) Nur Maria<sub>i</sub> liebt keiner t<sub>i</sub>  
only Mary-ACC loves nobody-NOM  
**Surface Scope:** The only one nobody loves is Mary.  
**Reconstruction Scope:** Nobody loves Mary and no other person.

Detecting the reconstructed reading. We provide evidence for the existence of the reconstructed reading even in cases like (1), by looking at contexts where the surface scope reading is explicitly denied (following Potts (2000); Gajewski (2005)). Consider a context where a group of speakers discuss which performers they adore (Madonna or Rihanna) and speaker A claims that everyone adores Madonna and most also adore Rihanna. The negation (*that is not true*) in (3) only makes sense if this proposition forms a contradiction with Speaker A’s utterance. Importantly, this should only be felicitous under the reconstructed reading.

- (3) ‘Dat is niet waar, **alleen Madonna** adoreert iedereen’, zei Peter. ‘Naar het optreden van Rihanna zijn we express niet geweest, echt niemand adoreert haar.’  
‘That is not true, only Madonna.acc adores everyone.nom, says Peter. We purposefully didn’t go to the performance of Rihanna, it’s really the case that nobody adores her’.  
**Surface Scope:** Madonna is the only person such that everyone adores her.  
**Reconstruction Scope:** Everyone is such that they adore only Madonna

Reconstruction under adverbials. Neeleman and Koot (2007) observe that in Dutch, reconstruction of a DP that occurs in the middle field following an adverbial is impossible. The same holds in German. DPs in the middle field therefore differ from DPs in first position, which generally can reconstruct. We show that [only + DP], when occurring in first position, **can** reconstruct under a range of adverbials in the middle field (possibly, definitely, again), while it **cannot** reconstruct when occurring in the middle field. To illustrate, the continuation *but John may have passed as well* only makes sense under a reconstructed reading ((4-a)), which is impossible in (4-b) and hence leads to infelicity.

- (4) a. [<sub>CP</sub> Alleen Maria<sub>i</sub> [<sub>C</sub> is<sub>j</sub> [<sub>deze</sub> keer [<sub>mogelijk</sub> [<sub>VP</sub> t<sub>i</sub> t<sub>k</sub> geslaagd]]]]]  
Only Mary is this time possible t<sub>i</sub> t<sub>k</sub> passed.

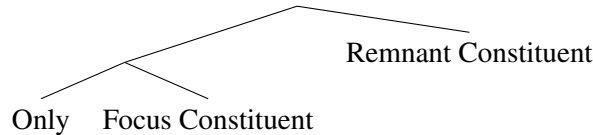
- (i) **Surface Scope:** Only Mary is such that she possibly passed this time  
 $\forall p' \in \text{Alt}, \neg \diamond p'$  unless  $p' = p$   
 ‘For people other than Mary, it is not possible that they passed.’
  - (ii) **Reconstruction Scope:** Possibly, Mary is the only one who passed this time  
 $\forall p' \in \text{Alt}, \diamond \neg p'$  unless  $p' = p$ .  
 ‘For people other than Mary, it is possible they didn’t pass.’
- b. [<sub>CP</sub>Deze keer [<sub>C</sub> is<sub>k</sub> [**alleen Maria**<sub>i</sub> [**mogelijk** [<sub>VP</sub> *t<sub>i</sub>* *t<sub>k</sub>* geslaagd]]]]]

Prosodic Question Answer Congruence. While (5-a) is a coherent answer to the question in (5), main prominence on the subject makes it sound like the answer to the question *Who definitely passed*, and does not seem to fit the present context (prominence on *bestimmt* is possible). In (5-a), there is simply no appropriate antecedent for the shift in prominence. The answer in (5-b), on the other hand, is an appropriate answer using subject prominence.

- (5) Who passed?
- a. ?#Ich glaub dass nur **Maria** bestimmt bestanden hat.  
 I believe that only Mary definitely passed has.
  - b. Nur **Maria** hat bestimmt bestanden.

This is as expected if in (5-b) [*nur Maria*] can reconstruct under the focus operator  $\sim$  (as well as the adverb), assuming the focus semantics proposed in Rooth (1992).

Syntactic Analysis: In order to capture the possibility of reconstruction of adnominal *only* + focus, as well as the attested restrictions on attachment of *only* as observed by B&H, we propose an alternative analysis (see lexical entry in (6)). Under this analysis, *only* takes two syntactic arguments, a constituent that corresponds to or at least contains its semantic focus (*Focus Constituent*), and a second constituent (*Remnant Constituent*), whose denotation has to compose with that of the first to form a proposition (cf. Rooth (1985); Krifka (2006); Wagner (2006)). The claim is that *only* can attach to any constituent that allows the creation of the appropriate configuration at LF. For example, Jacob’s (1981) observation that *nur* cannot attach to a DP inside prepositional phrases can be explained as a result of the impossibility of preposition stranding in German (cf. Bayer (1996)).



- (6) For all  $\sigma$ :  $\llbracket \text{Only} \rrbracket = \lambda C. \lambda w. \lambda x. x \in D_\sigma. \lambda p. p \in D_{\langle \sigma, \langle s, t \rangle \rangle}. p(x)$  in  $w$ .  $\forall y \in C \cap D_\sigma: [y \neq x \rightarrow p(y)$  is false]

Summary. Using a variety of tests we show that in German/Dutch *only* plus a following focus constituent can reconstruct as a constituent, contrary to the predictions of B&H. We offer an analysis that is compatible with this, as well as various syntactic constraints observed in B&H.

**Keywords:** Syntax, Germanic, Scope Reconstruction, Focus Association.

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## Semantic Agreement and the Mechanism of AGREE

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**Overview:** Semantically motivated agreement (SA) differs from morphologically motivated agreement (MA) in ways that are not accounted for in existing models of AGREE in the literature. Furthermore, interactions between the two processes suggest that they are part of the same operation, rather than two distinct operations: for nouns that control both SA and MA, in sentences with two targets of agreement, it is often the case that mismatches between the targets are allowed, but only in one way, in a manner reminiscent of Corbett's (1979) Agreement Hierarchy. In this paper we provide a new formulation of AGREE that is able to capture the differences between SA and MA, as well as deriving which mismatches are allowed and which are not.

**SA versus MA:** Certain 'hybrid' nouns allow for variable agreement options, which target either the morphological shape of the noun, or the semantic interpretation (if different). For instance, British varieties of English allow for morphologically singular collective nouns to control either singular or plural agreement:

- (1) The committee **is/are** making the decision right now.

Though there is often free variation, SA and MA are not completely interchangeable for speakers who allow both. In British English, plural agreement with collective nouns (=SA) is only allowed in a subset of environments that singular agreement is (=MA). The relevant generalisation that covers the differences is that SA is possible only when the controller or agreement c-commands the target of agreement *at the level of LF* (Smith 2013, 2015). In other words, *SA is only licensed in a Reverse Agree configuration* (see Wurmbrand 2011, Zeijlstra 2012 on Reverse Agree), whilst any local c-command relationship suffices for MA (Smith 2015). A CNP that controls plural agreement thus cannot reconstruct for scope, nor can it control plural agreement in existential constructions (Elbourne 1999).

- (2) a. A northern team **is** likely to be in the final.  $\exists \gg \text{likely} / \text{likely} \gg \exists$   
b. A northern team **are** likely to be in the final.  $\exists \gg \text{likely} / * \text{likely} \gg \exists$   
(3) \*There **are** a committee making the decision.

**SA and MA interact:** When 'hybrid' nouns like CNPs control agreement on two separate targets in a sentence, though there are 4 logically available configurations ((i) matching SA on targets 1 and 2, (ii) matching MA on targets 1 and 2, (iii) SA on target 1, MA on target 2, (iv) MA on target 1, SA on target 2), it is often the case that only 3 configurations are grammatical, with one mismatch sentence allowed, but the other sharply ungrammatical. Consider British English:

- (4) a. The government **has** offered **themselves** up for criticism.  
b. \*The government **have** offered **itself** up for criticism.

This is also seen in Hebrew, where the noun *be'alim* 'owner' is always morphologically plural but allows for singular agreement when the referent is a single owner (Landau to appear, only mismatches are shown, matching SA and MA are grammatical):

- (5) a. ? ha-beal-im **ha-kodm-im maxar** et ha-makom lifney šana  
the-owner-PL the-previous-PL sold.3.SG ACC the-place before year  
'The previous owner sold the place a year ago.'  
b. \*ha-beal-im **ha-kodem maxru** et ha-makom lifney šana  
the-owner-PL the-previous.SG sold.3.PL ACC the-place before year  
INTENDED: 'The previous owner(s) sold the place a year ago.'

**A revised model of AGREE:** In order to capture the differences between SA and MA, we propose that AGREE is a two step process of AGREE-LINK and AGREE-COPY (Benmamoun et al. 2009, Arregi & Nevins 2012, Bhatt & Walkow 2013). Building on these, we propose the following two-step model of AGREE:

- (6) Agreement by Probe  $\Gamma$  with Goal  $\gamma$  proceeds in two steps:  
a. AGREE-LINK: a  $\Gamma$  has unvalued  $\phi$ -features that trigger Agree with  $\gamma$  (possibly more than one). The result is a link between  $\Gamma$  and the  $\phi$ -features of the  $\gamma$ .

- b. AGREE-COPY: the values of the  $\phi$ -features of  $\gamma$  are copied onto  $\Gamma$  linked to it by AGREE-LINK.
  - i. if AGREE-COPY happens at transfer, this requires that  $\gamma$  c-command the  $\Gamma$ .

Following Smith (2015), we assume that  $\phi$ -features are formed of two halves, a  $uF$  that is legible to the morphological component and an  $iF$  that is legible to the semantic component. Hybrid nouns arise through a divergence of values on the  $uF$  and  $iF$  of a feature (the number feature on CNPs in British English is [ $uF:sg, iF:pl$ ]). The two feature-halves are both present in the syntax, before being separated at the point of transfer to the LF and PF components. This version of AGREE captures the fact that SA is possible only in a Reverse Agree configuration; since  $iFs$  are only present in narrow syntax and LF, and AGREE is an operation distributed over the narrow syntax and PF, then at the latest,  $iFs$  will only be able to be targeted at the point of transfer. SA is therefore no different to syntactic processes utilising AGREE that have motivated Reverse Agree models of AGREE (Zeijlstra 2012, Wurmbrand 2011, Zeijlstra & Bjorkman 2015). However, since AGREE-COPY also occurs post-syntactically, though only on morphological  $uFs$ , a distinction remains between processes that target the  $uF$  and the  $iF$ , and MA is able to look downwards (Baker 2008, Preminger 2015).

**Constraining mismatches:** The contrast in mismatches is captured through the timing of AGREE. MA (agreement targeting the  $uF$ ) appears to be the default choice for languages, with SA happening additionally to MA. Thus, we propose that for SA to be possible, a language must choose to make  $iFs$  *active* for agreement, in which case they are able to factor into agreement. We assume that AGREE-LINK cannot ignore an active  $iF$  in favour of a corresponding  $uF$ : an active  $iF$  will bleed MA. Furthermore, we propose that when AGREE-LINK targets an  $iF$  this can optionally result in the deactivation of the  $iF$ , at which point AGREE-LINK is able to target the  $uF$  value of the feature. Crucially, we assume that AGREE-LINK takes place iteratively at the first derivational point that target and controller are in the derivation. Mismatches arise when an  $iF$  is deactivated by the first instance of agreement.

*British English:* Since anaphors canonically merge in an object position, they merge into the structure before T (due to lack of data, we ignore languages which allow for anaphors in subject position). Thus, the anaphor in (4) undergoes AGREE-LINK with the subject when only  $vP$  is built. If the  $iF$  on the controller is active, the anaphor will receive plural agreement when AGREE-COPY applies. If the AGREE-LINK between anaphor and subject deactivates the  $iF$ , then the only option for T is to undergo AGREE-LINK (and AGREE-COPY) with the  $uF$  of the controller. Since  $iFs$  cannot be ignored if active, there is no possibility that the anaphor undergoes AGREE-LINK with the  $uF$  of the controller, and T undergoes AGREE-LINK with the  $iF$ .

*Hebrew:* The contrast between mismatches in BrE is derived through the fact that the anaphor in object position merges before T, and the  $iF$  on the controller is deactivated before T undergoes AGREE-LINK. We extend this logic to the Hebrew data in (5), by assuming that adjectives undergo AGREE-LINK after T. We propose that this derives from the proposal of Stepanov (2001) that adjuncts necessarily merge counter-cyclically into the derivation. Thus, the adjective in (5a) merges after T has undergone AGREE-LINK and deactivates the  $iF$  on the controller. Again, since T undergoes AGREE-LINK before the adjective, there is no possibility that T can agree with the  $uF$  and the adjective the  $iF$ .

**Mismatches between the same type of elements** Finally, we show that the current theory also accounts for mismatches among multiple attributives, as seen in Chichewa, where the gender class feature of *ngwazi* is [ $uF:9, iF:1$ ] (we also discuss Hebrew in the talk, which is a point of cross-linguistic variation with Chichewa):

(7) ngwazi **y-athu w-oyamba**

hero 9-our 1-first

‘Our first hero.’

(8) \*ngwazi **w-athu y-oyamba**

hero 1-our 9-first

INTENDED: ‘Our first hero.’

Though they are both treated as adjuncts, we show that the ordinal numeral in Chichewa merges before the adjective, and hence undergoes AGREE-LINK first, with the possibility of deactivating the  $iF$  before the adjective undergoes agreement.

**Conclusion:** By taking into account SA, largely ignored in Minimalist syntax, we obtain a more complete picture into the nature of AGREE. This model captures the structural differences between SA and MA, adding further support to recent proposal that splits AGREE into two distinct steps. Furthermore, we show that it also extends to capture possible and impossible patterns in agreement mismatches.

**The scope of additive operators: an argument for syntactic event decomposition**  
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This paper makes a novel argument for event decomposition in the syntax. We provide new evidence for the existence of a propositional node that denotes a result state, based on the observation that additive operators like, e.g., Greek *ke* gives rise to stative presuppositions in sentences with causative predicates (akin to the restitutive presupposition of *again*, cf. von Stechow 1996). We show that such presuppositions are not amenable to alternative semantic analyses, thus providing a more reliable diagnostic for syntactic event decomposition.

**Additive operators** in Greek are focus operators that are associated with the XP they adjoin to. The semantics of, e.g., *ke DP* is given in (1) (Propositional levels are predicates of eventualities of type *s*, *i* is a variable over eventualities of any type, we reserve the variable *s* for states). Given obligatory association with the DP, (2) gives rise to the presupposition that **John opened something other than the window**.

(1)  $[[ke(DP)]] = \lambda P_{e,st}. \lambda i_s. \exists i' \exists x \in [DP]^A \& x \neq [DP] \& P(x)(i')$ .  $P([DP])(i)$

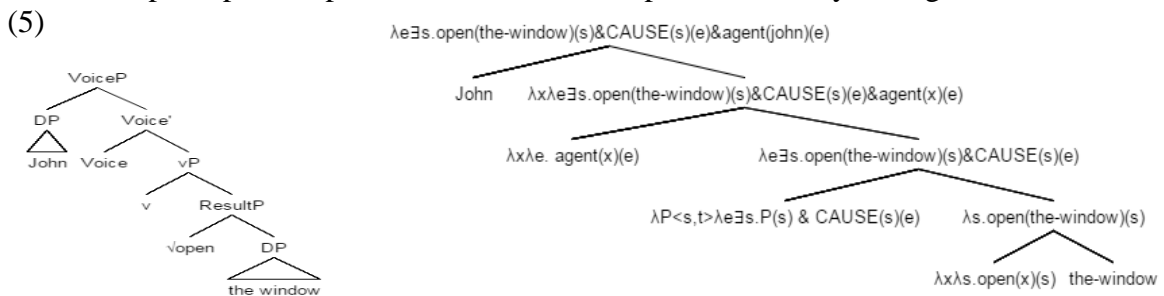
(2) O Janis anikse ke to PARATHIRO. (3) O Janis theli na dhi ke ti MARIA.  
 the John opened also the window                      the John wants subj see also the Mary  
 ‘John opened the WINDOW too.’                      ‘John wants to see MARY too.’

Whereas the associate of *ke* is uniquely determined by its overt position, its scope can vary. *ke DP* has the type of a generalized quantifier, so Quantifier Raising (QR, as in Heim&Kratzer 1998) to a propositional node may be required. If there is more than one propositional node and movement is allowed, as in (3) above, ambiguity arises. (3) presupposes either that John has seen someone other than Mary (*want* > *ke DP*) or that John wants to see someone other than Mary (*ke DP* > *want*). In summary: (a) The content of the presupposition of *ke* is propositional, (b) it is determined by the syntactic arguments of *ke*, (c) compositional interpretation might require QR, (d) QR targets a propositional node, (e) when more than one such node is available, QR gives rise to ambiguities.

**Stative presuppositions.** We observe that (2) is licensed in the context in (4) even though the presupposition above is not satisfied. A weaker presupposition must also be available for (2).

(4) Context: John is in a room whose door is always open. He opens the window.

Obligatory association with the DP excludes weaker presuppositions that would arise from association with wider constituents (e.g., association with the clause would derive the weak presupposition ‘something else happened’). Instead, we argue that (2) can give rise to the stative presupposition that **something other than the window was open**. Since we the content of the presupposition of *ke* is determined by its arguments, it follows that there exists a node that denotes a predicate of states and is syntactically accessible. For concreteness, we assume the decomposition of causatives in (5) from Alexiadou, Anagnostopoulou, and Schäfer 2015 (our account is in principle compatible with other decompositional analyses, e.g. Ramchand 2008).



*ke DP* composes directly with the root and a stative presupposition is derived, which is passed on via presupposition projection, as in (6). (The initial eventive presupposition is derived via QR to VoiceP.) In the absence of a syntactically present ResultPhrase, *ke DP* would necessarily

compose with a constituent that includes the CAUSE component, and only an eventive presupposition would be derived.

- (6)  $[[ (2) ]]^g = \lambda e \exists s: \exists s' \exists x \in D_e \& x \neq \text{the-window} \& \text{open}(x)(s'). \text{open}(\text{the-window})(s) \& \text{CAUSE}(s)(e) \& \text{agent}(\text{john})(e)$

Stative presuppositions also arise with **ditransitive predicates**, as in (7), whose decomposition has also been argued to include a result state, the content of which is determined by the root (see, e.g., Beck&Johnson 2004 in the context of *again*). The stative presupposition of (7) is that **someone other than Mary has a book**, satisfied in a context in which, e.g., Helen has a book not given to her by John. We assume the decomposition in (8). Since the root is a relation of individuals, QR is needed. Since (i) QR needs to target a propositional node, (ii) the content of the presupposition is a state, and (iii) the content of the presupposition is determined by the arguments of *ke DP*, it follows that there exists a syntactic node that denotes a state and is the target of QR. The relevant node here is ResultP. We show that double-object constructions (the  $DP_{dat} DP_{acc}$  frame) pattern alike, so that, regardless of other potential differences, both frames must include a propositional node denoting a result state.

- (7) O Janis edose ke sti MARIA ena vivlio.  
the John gave also to-the Maria a book  
'John gave MARY a book too.'

- (8)  $[\text{VoiceP} [\text{DP } o \text{ Janis}] [\text{Voice}' \text{Voice} [\text{vP } v [\text{ResultP}' [\text{DP } ke \text{ sti Maria}] [\text{ResultP}' 1 [\text{ResultP} [\text{DP } ena \text{ vivlio}] [\text{Result}' \sqrt{\text{din-}} t_1]]]]]]]$

- (9)  $[[\text{ResultP}'']^g = \lambda s: \exists s' \exists x \in D_e \& x \neq \text{maria} \& \text{have}(\text{a-book})(x)(s'). \text{have}(\text{a-book})(\text{maria})(s)$

An analysis of the ambiguity in terms of scope is confirmed by word-order facts. Fronted objects as in, e.g. (10) only give rise to an eventive presupposition. Fronted objects in OVS orders are fronted topics that take scope in their landing site (Gryllia 2008). If so, the argument of *ke DP* necessarily includes the CAUSE component.

- (10) Ke to PARATHIRO anikse o Janis.  
also the window opened the John  
'John opened the WINDOW too.'

- (11)  $[\text{TopP}' [\text{DP } ke \text{ to parathiro}] [\text{TopP}' 1 [\text{TopP } \text{Top} [\text{CP } \text{anikse } o \text{ Janis } t_1]]]]]$

**No semantic alternatives.** Restitutive readings of *again* have been analyzed without syntactic event decomposition. E.g., Fabricius-Hansen (FH, 1983, 2001) defines a second *again* based on counter-directionality. A counter-directional entry for *ke*, based on FH, is given in (12).

- (12)  $[[ke_c(\text{DP})]] = \lambda P_{e,st}. \lambda i_s. \exists i' \exists x \in [[\text{DP}]]^A \& x \neq [[\text{DP}]] \& P_c(x)(i'): P([[DP]])(i)$

where for  $P = \lambda e$ . John opened the window in  $e$ ,  $P_c = \lambda e$ . the window closed in  $e$

Assuming (12), (2) gives rise to the presupposition that something other than the window closed, as in (13b). This presupposition is too weak; (2) is infelicitous in contexts that satisfy it, but do not satisfy the stative presupposition, like e.g. the context in (13).

- (13) a.  $[\text{TP} [\text{DP } ke \text{ to parathiro}] [\text{TP } 1 [\text{TP } o \text{ Janis } \text{anikse } t_1]]]]]$

- b.  $[[ (14a) ]]^g = \lambda e \exists s: \exists e' \exists x \in D_e \& x \neq \text{the-window} \& \text{closed}(x)(e'). \text{open}(\text{the-window})(s) \& \text{CAUSE}(s)(e) \& \text{agent}(\text{john})(e)$

- (14) John was in a room whose door was open. He closed the door and opened the window.  
Pedersen (2014) re-interprets FH's approach in terms of scalarity. His analysis predicts that only scalar operators and scalar predicates give rise to Restitutive presuppositions. Stative presuppositions of additives are not amenable to such analyses, since (i) *ke* is a non-scalar additive operator, and (ii) stative presuppositions arise with non-scalar bi-eventive predicates, like, e.g., *mpeno* 'enter' in (15).

- (15) Context: The puppy was born in the kitchen and stayed there for two days. On Wednesday, we opened the door, and the puppy entered the living-room.  
To kutavi mpike ke sto SALONI.

the puppy entered also to.the living-room  
'The puppy also entered the living-room.'

### **Colorless green ideas still do sleep furiously**

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In generative syntax, debate over the existence of sophisticated mental grammars was settled with Chomsky's *The Logical Structure of Linguistic Theory* (1957/1975; *Syntactic Structures*, 1957), along with much later related work. But this debate has often been revived. Recently, Lau, Clark and Lappin (LCL 2014, 2015) have argued that differences in acceptability judgments can be closely approximated by models containing only information extracted from probabilistic accounts. Because differences in acceptability judgments are the primary evidence used to motivate sophisticated mental grammars, these results might be taken to imply that conventional categorical grammars might be eliminated in favor of surface probabilistic information or "gradient grammars." Here we examine to what extent such claims are warranted. Our preliminary conclusion is that they are not, based on four theoretically-relevant datasets evaluated using LCLs own probabilistic models: 300 randomly sampled sentence types from *Linguistic Inquiry*; 230 from Adger's 2003 *Core Syntax*; a new dataset of all 120 permutations of the five words in Chomsky's *Colorless green ideas sleep furiously*; and all 335 sentences from Lasnik and Uriagereka's 1988 *A course in GB syntax*. These provide a critical test of superficial probabilistic approaches because they constitute the actual data that linguists use to argue for the existence of sophisticated mental grammars (with *colorless green ideas* serving as one of Chomsky's original arguments that grammaticality is not identical to probability). Our statistical analysis shows that the LCL probabilistic acceptability models do not succeed, on at least three grounds. First, the correlations between human acceptability judgments and probabilities are inadequately low—the models do capture some of the human variation in acceptability judgments, but leave a preponderance unaccounted for, despite the use of "best-in-breed" statistical models. Second, a standard statistical examination of the difference between the LCL model predictions and actual human judgments, a so-called residual analysis, not carried out by LCL, reveals systematic patterns rather than an expected random distribution. Such systematic patterns suggest that the LCL models have missed important explanatory variables underlying sentence judgments. Of course, from the perspective of conventional generative grammar, it is clear what these "true variables" might be, and how they can be used. Third, there is essentially only one method available for fairly comparing gradient models of grammar with categorical models of grammar: comparison using pre-specified theory metrics. We argue that any proposal to adopt a new grammatical architecture must be evaluated according to the same set of metrics used to evaluate other proposals. In this case, LCL have proposed using an atypical one for syntactic theory (how well a theory predicts gradient acceptability), and have at the same time ignored the metrics that are typically used in syntax (e.g., among these, how well a theory explains certain syntactic phenomena, or how well a theory explains cross-linguistic variation or acquisition).

Grammatical theories cannot be directly observed, so in the final analysis all approaches resort to acceptability judgments. One might argue that continuous acceptability judgments imply that grammatical theories are similarly continuous, like the LCL probabilistic models. But continuous acceptability can also be explained by embedding categorical grammars in continuous cognitive systems (e.g., sentence processing). Therefore, LCL hold that a good model should yield a *strong correlation* with continuous acceptability judgments, and then attempt to demonstrate that their probabilistic model succeeds here. We

engage this debate on LCL’s own grounds. We thus investigate whether the LCL model indeed correlates well with judgments that matter for syntactic theory, and ask whether the strength of that correlation is what we would expect *if* the underlying grammar were indeed, following LCL, a trigram (more generally  $n$ -gram) model or else a state-of-the-art recurrent neural network model (rnn). These two sorts of models arguably represent the two current best-in-breed choices for statistically modeling, on the one hand either linear, string-like dependencies ( $n$ -gram models) or, on the other hand, hierarchical constraints (recurrent neural network models). One might expect *a priori*, for example, that a model based on sequential constraints might be able to capture the adjacency requirement of the English Case Filter (I am proud of John/\*proud John), while the recurrent neural network might be able to capture hierarchical constraints like those found in c-command.

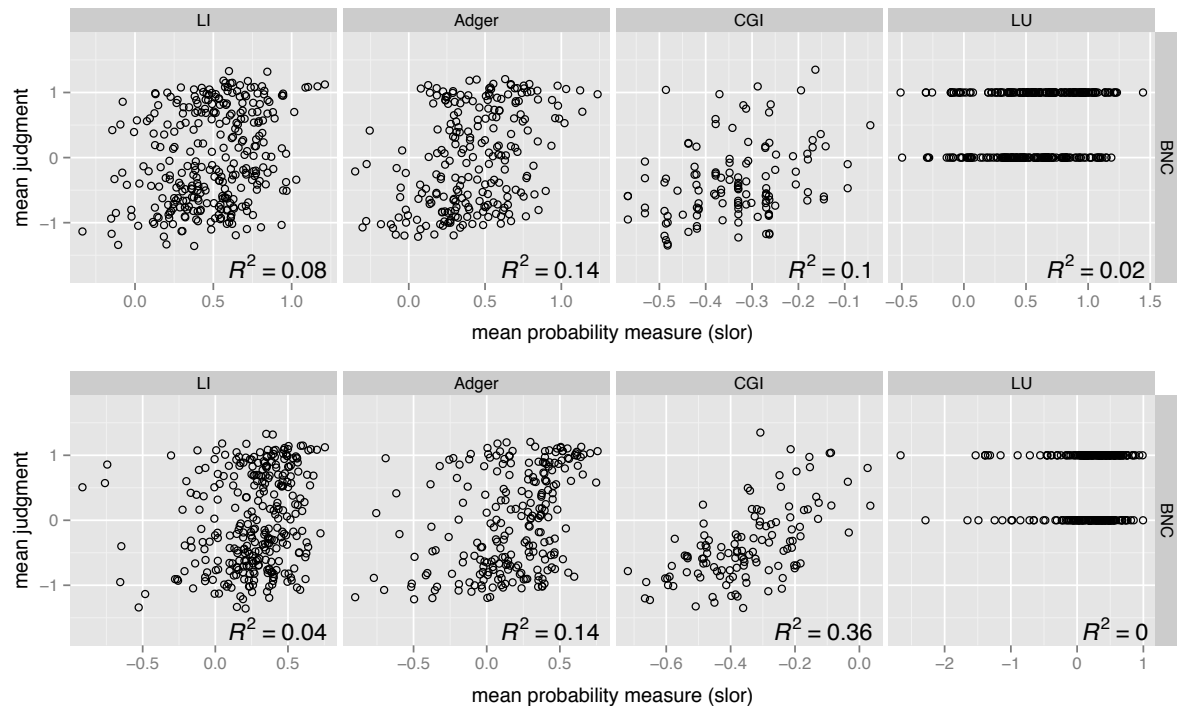
This modeling question becomes even more complicated because given even a binary categorical grammar, acceptability judgments and sentence productions are generated by combinations of grammars and processing systems. Acceptability judgments and surface probabilities will then still correlate, not just due to direct causation, but rather because of some intervening third-factors driving both grammar + processing systems. This means that the question is one of degree: Do we find correlations that are as strong as we would expect if surface probabilities were directly responsible for acceptability (direct causation), or do we find correlations more in line with what we would expect if acceptability and probabilities are related via some intervening third factor?

To assess this question, we first constructed sets of trigram models and recurrent neural network models, using as training data two large corpora, the British National Corpus (BNC) and the Corpus of Contemporary American English (COCA) for trigrams, and the BNC for the recurrent networks, using the exact code made freely available by LCL at their project website, [https://github.com/jhlau/acceptability\\_prediction](https://github.com/jhlau/acceptability_prediction).<sup>1</sup> We then tested how well these models predicted human acceptability judgments for the sentences in our four data sets (LI, Adger, CGI, and LU). For three of the datasets we collected human acceptability judgments using Amazon Mechanical Turk. For the LI dataset, we used the Likert scale results reported by Sprouse et al. 2013; for the Adger dataset, we used the magnitude estimation results from Sprouse and Almeida 2012; for the colorless-green-ideas (CGI) dataset, we could not simply use a rating task because all these sentences are relatively unacceptable; we therefore used a novel forced-choice experiment, asking participants which of a pair was more acceptable. We then used the Elo match-rating system to expand the forced-choice results into relative ratings. For the LU dataset, we are still in the process of collecting judgments; for the time being, we used Lasnik and Uriagereka’s binary judgments. Given the models and the human judgments, we then used several different acceptability measures proposed by LCL to standardize for sentence length and word frequency, and asked to what extent those 4 measures correlate with the acceptability of our 4 theoretically-relevant data sets, across the corpora. For reasons of space, we reproduce only some of our results below. In Figure 1 we present in two panels the results of training both trigrams and recurrent neural nets using the BNC corpus, along with the LCL normalized measure that generally produced the best correlations for the four datasets (biasing against our prior beliefs in a sophisticated grammar).

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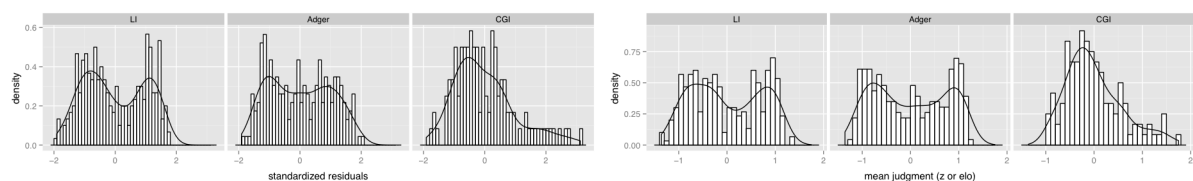
<sup>1</sup>As it happens, we discovered substantial programming bugs in the LCL  $n$ -gram code that precluded any kind of reliable replication, so we also relied on  $n$ -gram calculations using the SRI Language modeling toolkit (SRILM), a well-known, widely used, and reliable “commercial” package. The SRI toolkit yielded language model results that were substantially better than those obtained with the LCL code, so we report these values here, biasing against our prior beliefs in a sophisticated grammar.

Figure 1: best-performing correlations of probability and acceptability, trigram and recurrent neural network models. The first model is a trigram trained on the BNC, and the second a recurrent neural network.



While we found positive correlations between probability measures and human judgments for all four datasets to varying degrees, the question is whether these correlations are as strong as expected if surface probabilities *directly* cause acceptability judgments. But these acceptability-based correlations are by conventional standards quite low; they account for only a modest amount of the variability in the datasets: 4-8% for LI, 14% for Adger, 10-36% for CGI, and 0-2% for LU's binary judgments. (The relatively high  $R^2$  in one case, for CGI and neural nets, is attributable properties of the CGI dataset we discuss.) Second, these models leave much structure in the datasets unexplained: examination of residuals reveals that the raw judgment datasets and the residuals after subtracting out the probabilistic model contributions have the same specific distributions, suggesting that the probabilistic model fails to capture that structure, a bimodal shape suggestive of an underlying binary grammar.

Figure 2: Distribution of residuals (left) and model judgements (right) for the first three datasets.



These correlations are weaker, and the unexplained structure in the data larger, than one would expect if surface probabilities alone were directly generating acceptability judgments. This suggests the operation of a third factor, viz., underlying mental grammars. Further, the LCL probability models do not partition grammatical from ungrammatical sentences in a way congenial with many current linguistic theories. As computational tools increase in sophistication, it is important for the field to explore to what extent probabilistic information might replace some part of grammatical theory. That is just good science, especially given the fact that multiple factors are known to influence acceptability judgments. However, the

results of this study suggest that acceptability judgments can still provide strong evidence for the necessity of a sophisticated mental grammar—even when the example sentences are nearly 60 years old.

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## Coming and Going with a Shift in Perspective

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The verbs *come* and *go* are analyzed as having identical assertoric contents but different presuppositions (Fillmore 1971, Oshima 2006, 2007, Percus 2011). Very roughly, *come* presupposes the goal of the motion is where the speaker is (or their associates are), while *go* presupposes it is not (we put aside here complications regarding ‘homebases’, the tag-along reading of *come*, etc.; see Fillmore 1971). For example, if John is in London and is talking about George, who lives in NY, he could say “George is coming to London” but not “George is going to London”. Since these presuppositions are often relative to the speaker (and/or his associates), I call them *indexical presuppositions* (not to be confused with Cooper’s 1983 notion).

Contrary to previous analyses that assign indexical presuppositions to both *come* and *go* (Fillmore 1971, Oshima 2006, 2007, Percus 2011, a.o.), I show that while *come* has an indexical presupposition, *go* doesn’t, and claim that the restrictions on the use of *go* should be thought of as *anti-presuppositions* in the sense of Percus (2006). The idea is that *go* cannot be felicitously used, when *come* could be felicitously used instead. However, there is a problem for this analysis. In some cases, both *come* and *go* are felicitous. To account for such data, I propose: (i) that there’s a mechanism of *perspective shift* that alters the context against which the indexical presupposition of *come* is evaluated (cf. Percus 2011), and the anti-presupposition is only evaluated under one perspective.

**Go is neutral:** I first show that *go* has no indexical presuppositions. Consider (1a), uttered by John in London. He knows that George, who lives in NY, travels every summer.

(1) Where did George {a. go / b. come} last summer?

(1) is neutral with respect to the domain of *which*. In fact, “He actually came to London” is a possible, felicitous answer to it. Compare this to (2), which presupposes that all possible answers are John’s current location or perhaps places somehow associated with him (his ‘homebase’). The neutrality of (1a) would be unexpected, if *go* had an indexical presupposition, as it would exclude the speaker’s current location, London, from the set of possible answers.

The examples in (2) show the same point. In the same context as above:

(2) George didn’t {a. go / b. come} anywhere last summer.

(2a) entails that George didn’t travel to London last summer. Again, no restrictions on the domain of quantification. Compare this to (2b). This sentence is only about places where the speaker is or was (I’ll come back to the relevance of tense).

**Anti-presuppositions:** But *go* is not neutral in (3). If John is the speaker, (3a) is infelicitous.

(3) George {a. went / b. came} to London last summer.

We can understand the restrictions on the use of *go* as *anti-presuppositions* in the sense of Percus (2006). Specifically, *go* can be used felicitously only if *come* cannot be used felicitously. Following previous studies, I assume that this competition is enforced by the principle of *Maximize Presupposition* (MP) (Heim 1991, Percus 2006, 2010, Sauerland 2008, Singh 2011, a.o.). Specifically, (3a) is blocked in the above context, because (3b) is felicitous. Furthermore, (1) and (2) can be made sense if MP is computed with respect to a fixed domain of quantification. That is, if the domain includes places other than London (e.g. Paris), (1b) and (2b) are infelicitous, and consequently (1a) and (2a) are felicitous, even if the domain includes London.

However, there is a puzzle: In some cases, both *come* and *go* are felicitous, which is exactly what MP prohibits. For example, (4) are both felicitous with the speaker being in London.

(4) George will {a. go / b. come} to Paris, while I am there next week.

**Perspective Shift:** Notice that *come* in (4b) is relative to the speaker’s future location, i.e. Paris. In general, the indexical presupposition of *come* can be shifted to the reference time, as previous studies observe (Fillmore 1971, Oshima 2006, 2007). Fillmore (1971) notices that *go* is always relative to the current time, unlike *come*. This asymmetry is illustrated by (5). Suppose the speaker moved to London from Paris two years ago and lives there since. Alex was in London

three years ago for a conference. In this context, (5a) is infelicitous, unlike (5b).

(5) Alex {a. went / b. came} to London before I moved here.

The indexical presupposition of *come* in (5b) is satisfied relative to the current time. The anti-presupposition of *go* in (5a) would be satisfied relative to the past time, but (5a) is infelicitous. What this means is that the indexical presupposition of *come* can optionally be interpreted relative to the reference time—a phenomenon I call *perspective shift* (perspective shift can involve other operators than tense; see below). On the other hand, the anti-presupposition of *go* cannot shift to a different time. I claim that this lead to a solution of the puzzle above, with an auxiliary assumption that MP is computed either with a shift or without a shift. Concretely, (4a) is felicitous, because *go* does not shift, so its alternative with *come* is also relative to the current time, when the speaker is in London. Then the indexical presupposition of *come* is not satisfied, and consequently *go* can be used. (4b) is felicitous, simply because the indexical presupposition of *come* can be shifted to the future time.

**Monstrous Semantics:** To account for perspective shifting, I postulate a ‘monstrous operator’ that shifts the temporal parameter that *come* refers to. Specifically, following Percus (2011), I assume that  $\llbracket \cdot \rrbracket$  is relative to an assignment  $g$  and two Kaplanian contexts,  $c_i$  for indexicals (which don’t shift in English) and  $c_p$  for *come* (and others perspective-shifting items; see Bylinina, McCready & Sudo 2015, Sells 1989). The denotation of *come* looks like (6). I assume the pronominal theory of tense here but nothing hinges on this.

(6)  $\llbracket \text{George will}_3 \text{ come to London} \rrbracket^{g, c_i, c_p}$

- a. Presupposition:  $\text{spkr}(c_p)$  is in London at  $\text{time}(c_p)$  and  $g(3) > \text{time}(c_i)$
- b. Assertion: George moves to London at  $g(3)$

*George will go to London* has the same assertion but no indexical presupposition.

Crucially, while  $c_i$  is fixed to the context of utterance (in English; see Schlenker 1998, 2003, Anand 2006, Sudo 2012 for other languages where it is not),  $c_p$  can be manipulated by operators (cf. Schlenker’s 2014 *super-monsters*). In particular, I postulate the operator  $\mathcal{T}$  that shifts  $\text{time}(c_p)$  to the reference time. I assume that tense combines with AspP denoting a predicate of time intervals, and  $\mathcal{T}$  can optionally appear between them.

(7)  $\llbracket \mathcal{T} \text{ AspP} \rrbracket^{g, c_i, c_p} = \lambda t'. \llbracket \text{AspP} \rrbracket^{g, c_i, c'_p}(t')$  where  $c'_p$  is just like  $c_p$  except  $\text{time}(c'_p) = t'$ .

This optional operator enables perspective shift with *come*, as in (8).

(8)  $\llbracket \text{George will}_3 \mathcal{T} \text{ come to London} \rrbracket^{g, c_i, c_p}$

- a. Presupposition:  $\text{spkr}(c_p)$  is in London at  $g(3)$  and  $g(3) > \text{time}(c_i)$
- b. Assertion: George moves to London at  $g(3)$

Recall that the anti-presuppositions of *go* cannot be relative to the reference time, as shown by (5a). This is explained by the economy condition that prohibits vacuous uses of  $\mathcal{T}$ . Having no indexical presuppositions, *go* is unaffected by  $\mathcal{T}$ , so  $\mathcal{T}$  is not used with *go*. On the assumption that the alternative with *come* cannot contain an additional element, it follows that the anti-presuppositions of *go* do not shift.

**Attitude contexts:** Interestingly, the anti-presuppositions of *go* do shift in attitude contexts (Oshima 2006, 2007, Percus 2011). Suppose the speaker is in London and Alex is in Paris. Then (9) are both acceptable.

(9) Alex said that George is {a. going / b. coming} to London.

We can account for perspective shift in attitude contexts with a different operator  $\mathcal{M}$ , which shifts  $c_p$  to the reported speech context (similarly to the ‘monster’ postulated by Anand 2006 and Sudo 2012 for *indexical shift*). In particular, it not only shifts the time parameter but also the speaker parameter. What is puzzling is why perspective shift of *go* is allowed in (9a) but not in (5a). To solve this, I claim that  $\mathcal{M}$  is always required for semantic reasons, but it may shift  $c_p$  to the reported context or the actual context. The former possibility accounts for (9a) and the latter (9b). The details cannot be presented here, but indexing  $\mathcal{M}$  will give us enough flexibility (cf. Sudo 2012).

(10)  $\llbracket \mathcal{M}_j \text{ CP} \rrbracket^{g, c_i, c_p} = \llbracket \text{CP} \rrbracket^{c_i, g(j)}$

**De-Phasing Effect: External Pair-Merge of phase head and non-phase head**  
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**Synopsis:** In the minimalist program for linguistic theory, the only fundamental operation is unbounded (set-)Merge. Chomsky (2004) argues that internal (set-)Merge comes free as well as external (set-)Merge, and suggests that there is an operation of **pair-Merge** that is a descendant of Adjunction. Therefore, there are four possible sub-types of Merge operation. This paper seeks for the possibility of the existence of external pair-Merge of C to T(<T, C>) and its consequences.

**Issues:** Chomsky (2004, 2005, 2008) argues that some mechanism is necessary for capturing a fundamental property of human language, which is discrete infinity. To meet this requirement, Merge should come free and it is applied either externally or internally (Chomsky 2004). In addition to set-Merge, pair-Merge is introduced as an empirical requirement, which is different from set-Merge in that it creates ordered sets as opposed to set-Merge that creates unordered sets. As a consequence, it is natural to think that there are external/internal set-Merge and external/internal pair-Merge. Moreover, Epstein, Kitahara and Seely (2016, henceforth **EKS**) argue that “in the absence of some stipulation preventing it, it [pair-Merge] can apply in two ways: internally and externally.” Namely, a null hypothesis is that the rule applications of the four sub-types of Merge are ‘freely ordered’. The relevant examples discussed in Chomsky (2015) are the derivation of ECM case in (1) and the derivation of bridge verb case in (2).

- (1) a. He expects John to win.      b.  $\{ \langle R, v^* \rangle, \{ \alpha = \langle \varphi, \varphi \rangle DP_i, \{ R, \{ \beta t_i \dots \} \} \} \}$   
(2) a. John thinks that he is intelligent.      b.  $\{ \langle R, v^* \rangle, \{ \varepsilon = \{ \delta, \{ R, \{ \delta C, \dots \} \} \} \} \}$   
c.  $\{ \langle R, v^* \rangle, \{ \varepsilon R, \{ \delta C, \dots \} \} \}$       d.  $\{ \langle R, v^* \rangle, \{ C, \dots \} \}$

It is assumed in Chomsky (2015) that there is labeling algorithm (**LA**) that executes minimal search to determine the label of syntactic objects (**SOs**). The order of operations in (1b) are as follows: (i) external set-Merge of root(**R**) to its complement, (ii) internal set-Merge of DP, (iii) external set-Merge of  $v^*$  to  $\alpha$ , reaching phase level, and feature inheritance of  $v^*$  to R occurs, (iv)  $\alpha$  is labeled by  $\langle \varphi, \varphi \rangle$ , (v) R is raising to  $v^*$  and  $v^*$  is affixed to R so that  $v^*$  becomes invisible, and phasehood of  $v^*$  is activated at the copy of the R, (vi) transferring of  $\beta$ . Thus, the point in this case is that the copy of the root is visible as phasehood. The case of (2) is the bridge verbs case. If the complement of R(*think*) is raised to specifier of R (*think*) in (2b), there is no relevant features with R(*think*) and SO  $\delta$ , resulting labeling failure of  $\varepsilon$ . If the SO  $\delta$  does not move to specifier of R(*think*) in (2c), the copy of the root is invisible so that the label of the  $\varepsilon$  is the label of  $\delta$ , which is C. However, EKS (2016) argue that the (in)visibility of the copy of the root in Chomsky (2015) is paradoxical because it is visible for minimal search in the case of ECM/ transitive verbs but invisible for minimal search in the case of bridge verbs. To solve this paradoxical situation, EKS (2016) propose that Merge, including set-/pair-Merge, can apply freely. In the case of bridge verbs, they propose the following order of operations in (2d): (i) external pair-Merge of  $v^*$  to R (*think*), (ii) external set-Merge of  $\langle R, v^* \rangle$  to  $\delta$  (the complement of R). There is no copy of the root so that there is no problem of (in)visibility of root without adding any stipulation.

**Proposal:** Based on the proposal in EKS (2016) that external pair-Merge can apply freely, I argue that external pair-Merge of C to T can be deduced as a null hypothesis. The consequence of external pair-Merge of phase head to non-phase head prior to feature inheritance is the property of de-phasing the phasehood of phase heads. De-phasing effect of phase heads is shown in the case of head movement in Chomsky (2015). Head movement is the operation that a higher head is affixed to a lower head by internal pair-Merge and  $v^*$  becomes invisible, which means losing its phasehood since the locus of the phases are uninterpretable features on phase heads. EKS (2016) show that external pair-Merge of  $v^*$  to R makes  $v^*$  invisible so that the phasehood of  $v^*$  are de-activated in (2). In addition, Chomsky (2004) notes that pair-Merge creates asymmetric relation between XP and YP, and the Adjunct Condition can be deduced from external pair-Merge of XP and YP ( $\langle XP, YP \rangle$ ). Namely, pair-Merge makes adjunct phrases invisible for probes. Therefore, I propose that external/internal pair-Merge makes the second member of the pair invisible. As a consequence, I argue that external pair-Merge of C to T de-activates the phasehood on C that becomes invisible and it is realized as infinitival marker *to* in English. As for labeling, since the amalgam of  $\langle R, v^* \rangle$  serves as a label while R is too weak to serve as a label, I put forward that non-phase heads R and T is too weak to serve as a label but the amalgam of  $\langle R, v^* \rangle$  and  $\langle T, C \rangle$  can serve as a label if we assume the parallelism between C phases and  $v^*$  phases.

**Analysis:** The proposals are two fold: external pair-Merge of C to T can apply freely; and the amalgam created by external pair-Merge of C to T is the de-phased head that is realized as infinitival marker *to* in English, which serves as a label. As a consequence, we can derive

right derivations for tough-, ECM-, raising-, and control-constructions in English in a natural and simplest way in (3)-(8).

- (3) a. John is easy to please.  
b.  $\{C, \{John_i, \{T, \{t_i, \{easy, \{PRO_{arb}, \{\beta \langle T, C \rangle, \{\alpha \langle R, v^* \rangle, t_i\}\}\}\}\}\}\}$
- (4) a. \*John<sub>i</sub> seems that Bill likes t<sub>i</sub>.  
b.  $\{C, \{John_i, \{T, \{seems \{t'_i \{that(C), \{Bill, \{likes t_i\}\}\}\}\}\}\}$
- (5) a. I expected John to win. b.  $\{CP \dots, \{\langle R, v^* \rangle, \{John_i, \{R, \{t_i, \langle T, C \rangle, \dots\}\}\}\}\}$
- (6) a. John seems to be happy. b.  $\{CP \dots, \{John_i, \{\langle R, v^* \rangle, \{t_i, \{\langle T, C \rangle, \dots\}\}\}\}\}$
- (7) a. John hopes to leave. b.  $\{CP \dots, \{John, \{\langle R, v^* \rangle, \{t_i, \{\langle T, C \rangle, \dots\}\}\}\}\}$
- (8) a. John persuaded Harry to leave.  
b.  $\{CP \dots, \{\langle R, v^* \rangle, \{Harry_i, \{R, \{t_i, \{\langle T, C \rangle, \dots\}\}\}\}\}\}$

In (3), tough-constructions include the ‘proper’ improper movement. Assuming that *John* moves from object position in the embedded clause,  $v^*/C$  in the embedded clause becomes invisible for minimal search by external pair-Merge of  $v^*/C$  to  $R/T$  so that the phasehood is de-phased twice. The label of  $\alpha$  becomes  $\langle R, v^* \rangle$  and the label of  $\beta$  becomes  $\langle T, C \rangle$ . Moreover, the unvalued Case on *John* is not valued at the embedded clause since the external pair-Merge of  $v^*/C$  to  $R/T$  makes uninterpretable features on  $C/v^*$  invisible for minimal search. Thus, *John* is possible to move freely to the matrix clause. On the other hand, the example in (4) indicates that the derivation is improper movement and the phonological content of  $C$  is realized as a complementizer *that* so that pair-Merge is impossible (Nomura 2015). Thus, it cannot de-phase the embedded clause in (4). The examples in (5)-(8) show that embedded clauses are de-phased by external pair-Merge of  $C$  to  $T$  and right derivations can be derived. The same is true for Japanese examples in (9)-(10). Hyper-Raising, which allows the subject in the embedded finite clause to move to the matrix clause in (9) and a long distance passive in (10) can also be predicted by operating external pair-Merge.

- (9) a. \*They<sub>i</sub> seem [that t<sub>i</sub> like Mary]. (cf. It seems that they like Mary.) (Ura 1994a: 297(1a))  
b. Karera-ga<sub>i</sub> kyoo-no kaigi-de (Mary-niyotte) [t<sub>i</sub> asita kuru to] houkokus-are-ta.  
They-NOM<sub>i</sub> today-GEN meeting-at Mary-by t<sub>i</sub> tomorrow com COMP report-PASS-PAST  
‘Lit. \* They<sub>i</sub> were reported by Mary at today’s meeting that t<sub>i</sub> would come tomorrow’  
c.  $\{CP, \{TP \text{ Karera-ga}_i, \dots, \{\langle R, v^* \rangle, \dots, \{\langle T, C \rangle, \{t_i, \dots\}\}\}\}\}$
- (10) a. Taroo-ga<sub>i</sub> Mary-niyotte [t<sub>i</sub> Jiroo-ni keisatsu-o yoba-re-ta to] hanas-are-ta.  
Taroo-NOM<sub>i</sub> Mary-by [t<sub>i</sub> JIRO-DAT police-ACC call-PASS-PAST COMP talk-PASS-PAST  
‘Lit. \* Taroo<sub>i</sub> was talked by Mary that t<sub>i</sub> was called by police by Jiroo.’  
b.  $\{CP, \{TP \text{ Taroo}_i, \dots, \{\langle R, v^* \rangle, \dots, \{\langle T, C \rangle, t_i, \dots\}\}\}\}$

In German, external pair-Merge is executed in a different way from English. *Zu* in German, like *de* in French and *di* in Italian, is realized as infinitival complementizer (Biskup 2014) and it is known that  $T$  is  $\phi$ -complete and subject in the embedded clause receives null case. *Zu* is not a full complementizer but not the same as English infinitival *to*. In my analysis, the external pair-Merge is executed as  $\langle C, T \rangle$ , that is, uninterpretable features on  $C$  are visible for minimal search. As a consequence, ECM in German is impossible with *zu* in (11b).

- (11) a. Er sah ihn liegen. b. \*Er sah ihn zu liegen. c.  $\{Er, \dots, \{\langle C, T \rangle, \dots, \text{ihn}, \dots\}\}$   
He saw him lie he saw him to lie  
‘He saw him to lie.’ (Biskup 2014)

There is a possibility that what derives language variation depends on the order of operating external/internal pair-Merge to phase heads and non-phase heads in narrow syntax.

**Theoretical Implications:** We also can get the desirable predication about Merge over Move principle without mentioning this principle as shown in (12)-(13).

- (12) a. There seems to be a man in the room.  
b.  $\{There, \{seems \{\alpha = \langle T, C \rangle \langle T, C \rangle, \{be, \{a \text{ man}, \text{in the room}\}\}\}\}\}$
- (13) a. \*There seems a man to be in the room.  
b.  $\{There, \{seems \{\alpha = ? a \text{ man}, \{\langle T, C \rangle, \{be, \{t_i, \text{in the room}\}\}\}\}\}\}$

The example in (13) shows that the label of  $\alpha$  is not determined because of the structure  $\{XP, YP\}$ , which is ambiguous to be labeled by LA (Chomsky 2013, 2015). Put differently, the structure in (13b) shows that there is no relevant features between *a man* and  $\langle T, C \rangle$  in  $\alpha$  because minimal search cannot find uninterpretable features on  $C$  in  $\langle T, C \rangle$ . The example of (12) shows that the label of  $\alpha$  is  $\langle T, C \rangle$  which is realized as *to*. Furthermore, there is no need to satisfy the EPP requirement because the amalgam of  $\langle T, C \rangle$  is determined as the label of  $\alpha$  in the case of (12). Namely, it is enough for  $\langle T, C \rangle$  to serve as a label though it is necessary for finite  $T$  in English to satisfy EPP otherwise the labeling failure occurs. If these are tenable, the proposal that the existence of external pair-Merge of  $C$  to  $T$  is guaranteed.

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## Perspectives and reflexivity (or why reflexives resist being perspectival)

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Although the role of grammatical perspective has been studied with respect to long-distance anaphora (henceforth, LDA) and logophora, it has seldom been discussed in connection with co-argument anaphora (henceforth, “reflexivity”). This abstract attempts to explain this discrepancy in part by arguing that reflexivity, unlike other kinds of anaphora, requires additional grammatical “crutches” (which not all languages may have) to be perspective-driven. Evidence for this comes from the Dravidian language Tamil where reflexives *are* perspective-driven but involve additional verbal marking (the crutch). If the proposal is correct, it additionally supports the idea that grammatical perspective is structurally instantiated.

**Background:** Although sometimes characterized as being “subject-oriented” and thus treated along purely syntactic lines (e.g. I-to-I movement analysis of Pica, 1987, and relativized subject hypothesis of Manzini and Wexler, 1987), it has been recognized that LDA antecedence is actually regulated by grammatical perspective, e.g. for Italian (Bianchi, 2003; Giorgi, 2010), Norwegian (Hellan, 1988; Lødrup, 2007), Icelandic (Sigurðsson, 1990; Reuland, 2011), Dutch (Rooryck and vanden Wyngaerd, 2011), Japanese (Kuno, 1987). Sundaesan (2012) similarly concludes for Tamil that antecedence in LDA and logophora is determined not by syntactic subjecthood (which is neither necessary nor sufficient but is merely tendential) but by sensitivity to mental and/or spatio-temporal perspective (with subject-orientation falling out as a tendential epiphenomenon of this). In both logophora and LDA, the antecedent denotes an individual that holds a mental and/or spatio-temporal perspective toward some predication containing the anaphor. Additionally, Sundaesan (2012) presents evidence — showing that perspectival information influences the shape of verbal agreement in certain structures — to argue that grammatical perspective is syntactically represented. Building on intuitions in Koopman and Sportiche (1989), she proposes that it is a silent pronoun (*pro*) in the Spec of a Perspectival Phrase (PerspP) in certain extended projections (with the categorial choice of projection being potentially parametrised). This perspectival *pro* is in the local domain of the anaphor: it syntactically Agrees with and (LF-)semantically binds the anaphor, and is non-obligatorily controlled (Williams, 1980) by the perspective-holder individual. It thus mediates the relationship between the anaphor and its antecedent. Strikingly similar proposals have more recently been made based on evidence from Japanese and French, in Nishigauchi (2014) and Charnavel (2015), respectively.

**Tamil Reflexivity Data:** Reflexivity typically only obtains in the presence of a morpheme *ko* suffixed on the main verb (1). Strikingly, LDA and logophora can obtain even in the absence of *ko* (but *ko* doesn’t block anaphora) — (2):

- (1) Kalpana<sub>i</sub> tann-æ<sub>{i,\*j}</sub> ki[[i-ko-ŋd-aa/\*ki]]-in-aa].  
Kalpana.NOM ANAPH-ACC.SG pinch-*ko*-PST-3FSG/\*pinch-PST-3FSG  
“Kalpana<sub>i</sub> pinched herself<sub>{i,\*j}</sub>.”
- (2) Siva<sub>i</sub> [<sub>CP</sub> Kalpana<sub>j</sub> tann-æ<sub>{i,\*j}</sub> ki]]-in-aa[-ünnü] nene-tt-aan.  
Siva Kalpana ANAPH-ACC.SG pinch-PST-3FSG-COMP think-PST-3MSG  
“Siva<sub>i</sub> thought that Kalpana<sub>j</sub> pinched him<sub>{i,\*j}</sub>.”

Note that the same anaphor *ta(a)n* is used in both reflexive (1) and non-reflexive anaphora (2). Furthermore, reflexivity, like LDA/logophora in Tamil, is also perspective-driven: (i) agents and experiencers — which, by virtue of their thematic roles, readily denote perspective holders — serve as antecedents, and (ii) just as in LDA/logophora, non-sentient antecedents are ruled out (which makes sense if non-sentient individuals cannot bear perspective). I will thus pursue a unified analysis of these patterns.

**Central questions:** Why does reflexivity require special marking in Tamil, and why don't other types of anaphora do so? How does this relate to the role of perspective?

**Proposal:** reflexivity, by definition, instantiates the only dependency where the targeted antecedent and anaphor are co-arguments within a single VoiceP. Recent work (Bylinina, McCready, and Sudo, 2014; Bylinina and Sudo, 2015) uses the availability of perspectival-shifting (between speaker-perspective and the perspective of a salient attitude-holder) in various embedded contexts, to argue that, while CPs, PP<sub>s</sub>, and DP<sub>s</sub> are perspective-shifting domains — domains that, under this model, would host their own PerspP — *v*Ps/VoicePs are not. I.e. the smallest perspectival domain must be larger than a VoiceP, thus will properly contain both the external and internal argument of a VoiceP. These points together have the important consequence that reflexivity is the only anaphoric dependency where the anaphor and its targeted antecedent are both within the same minimal PerspP. I adopt Sundaesan (2012)'s proposal of a perspectival *pro* in Spec-PerspP which binds the anaphor. Now, in the hypothetical reflexive structure where the co-argument of the anaphor would indeed be able to denote the perspective-holder with respect to the PerspP containing both itself and the anaphor (thus serve as the anaphor's antecedent), the perspectival *pro* would not only be non-obligatorily controlled by the antecedent as usual — it would additionally asymmetrically c-command it. If the co-argument is an R-expression, this would yield a Condition C violation; if the co-argument is itself a pronoun, a Condition B violation. Either way, the derivation would crash. Such a perspectival configuration is thus either avoided (explaining why reflexivity is crosslinguistically often not perspective-driven) or requires the help of additional crutches to overcome this problem (as in Tamil). I argue that *koŋ* allows the external argument to serve as a perspectival antecedent without violating Condition B/C by: (i) introducing a PerspP in its complement, and (ii) thematically raising the external argument from Spec-VoiceP to its own specifier. The external argument thus ends up in a position where it is above the minimal PerspP containing the anaphor, and can thus licitly serve as a potential perspectival antecedent to the anaphor.

I build on two conclusions in Sundaesan (2012). First, Sundaesan shows that *koŋ* spells out a head that is distinct from and higher than Voice. This is straightforwardly shown by the fact that the morpheme that instantiates Voice in Tamil linearly precedes *koŋ*, and also that the suffixation of *koŋ* is independent of predicate valency (i.e. *koŋ* can occur on unergatives, unaccusatives and non-reflexive transitives, thus is also not a reflexive marker per se). Sundaesan proposes, rather, that *koŋ* is a light verb equivalent of an intensional (e.g. 'think') or spatial ('behind'/'where') predicate — specifically, a semi-functional restructuring predicate (Wurmbrand, 2001) merged above Voice. Second, based on a native-speaker grammaticality survey and an investigation of the compatibility of *koŋ* across Levin (1993) verb-classes, Sundaesan argues that *koŋ* introduces a mental/spatial affectedness semantics which then “rebounds” (Kemmer, 2003) onto the external argument. She models this by proposing that the affectedness semantics is assigned as a  $\theta$ -role to the external argument: since  $\theta$ -role assignment happens under strict locality, the external argument must be “thematically raised” (Ramchand, 2008) into Spec-*koŋ*P.

To these two conclusions, I now propose a third. Perspectival anaphora in Tamil is always possible into the complements of spatio-temporal and intensional predicates in Tamil — which Sundaesan derives by proposing that they always host a PerspP. Since *koŋ* is a light verb equivalent of such predicates, I propose that it also selects a PerspP in its complement. Earlier evidence (Bylinina and Sudo, 2015) showed that VoiceP cannot host PerspP — but since *koŋ* is merged above VoiceP, this is not an issue: the PerspP is thus merged below *koŋ* and above VoiceP. We can now use this state-of-affairs to explain why reflexivity successfully obtains in a sentence like (1). We noted that the PerspP is merged between *koŋ*P and VoiceP. Thus, when the external argument is thematically raised to Spec-*koŋ*P, it is moved out of this minimal PerspP which

also contains the anaphor. As such, it is able to denote a perspective-holder with respect to this minimal PerspP without incurring a Condition B/C violation. In non-reflexive anaphoric structures, the intended antecedent already begins its life outside the minimal PerspP containing the anaphor: thus, no extra mechanisms (e.g. *ko*) are needed to help it denote a perspective-holder.

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Multiple remnant sluicing is phase constrained

**1. Multiple Remnants must be contained in the smallest common phase.** Base Generated Remnants have been proposed in order to account for (1a), which cannot be derived via evacuation movement in (1b). Examples like (1a) are argued to be coordination of full CP's plus ellipsis since they allow 'either' modification (1c) that needs to target CP's (Hofmeister 2010). Bruening (2015) proposes that ellipsis in (1a) targets a prosodic unit  $\phi$  and deletes all but  $\Phi$ , the head of  $\phi$ , which is the most prominent subconstituent as is shown in (1c).

1. a. I disproved theories held by Wittgenstein last year and  
(( $\phi$  I disproved theories held by ( $\phi$  Einstein))( $\phi$  this year))  
b. \* Einstein<sub>i</sub>, I disproved theories held by t<sub>i</sub> this year.  
c. Either I disproved theories held by Wittgenstein last year, or Einstein this year

**I show that prosodic ellipsis needs to be syntactically constrained via phase-based linearization (Fox & Pesetsky 2005) that forces both remnants to be spelled out in the same cycle.** Consider (2), where the adjunct 'this year' can only modify 'held'.

2. I met a man who disproved theories held by Hawking last year and ( $\phi$  I met a man who  
[disproved theories held by ( $\phi$  Penrose) ( $\phi$  this year)]

Prosodic deletion per se cannot account for this restriction. However, a requirement that both remnants are linearized vis a vis each other in the same spell-out domain makes the correct prediction. A similar restriction exists in sluicing. English allows marginally multiple wh-remnants as seen in (3a) (Lasnik 2013), but they cannot be in different phases that are separated by an Island (3b). The same holds for Spanish (4a vs 4b), Polish (5a vs 5b). The second remnant must move to the minimal phase containing the first remnant in prosodically licensed ellipsis. Islands block this movement.

3. a. One of the students spoke to one of the professors, but I don't know which \*(to) which  
\*b. John saw one of the professors who spoke to one of the students but I don't know  
which to which  
4. a. Contrataron a un lingüista que le dio un libro a un profesor, pero no sé qué libro  
hired a linguist who gave some book to some professor but not know which book  
a qué profesor.  
to which professor  
\*b. Contrataron a un lingüista que sabe un dialecto, pero no sé qué lingüista qué dialecto.  
hired some linguist who knows some dialect but not know which linguist which dialect  
6. a. Oni zatrudnili lingwistę który podarował jakaś książkę jakiemuś profesorowi, ale nie  
They hired linguist who gave some book some professor but not  
wiem którą książkę któremu profesorowi  
know which book which professor  
\*b. Oni zatrudnili jakiegoś lingwistę który zna jakiś dialekt, ale nie wiem  
They hired some linguist who knows some dialect but not know  
którego lingwistę który dialekt  
which linguist which dialect

**2. Second Remnant must right adjoin to Spec of common phase.** Lasnik (2013) argues that the lack of P-stranding in the second remnant is due to it being right adjoined as high up as the position of the first remnant. Rightward movement (7) does not allow P-stranding

- \*7. A linguist spoke about yesterday a paper on sluicing.

This correlates with the lack of possible P-omission in (3a).

Selkirk & Kratzer (2007) show that prominence is assigned to the topmost XP in a phase. In

multiple remnant ellipsis both remnants are equally prominent when the second remnant right adjoins as high as the first. The first can then remain in situ. Both remnants are then equally high structurally, but linearly ordered at Spell-out.

**3. First Remnant can remain in-situ** since in languages like Polish (8) and Spanish (9) P-omission is only possible with the first remnant but not the second. Both languages do not allow P-stranding (Rodrigues 2009 Nykiel 2013) and P-omission cannot be via movement, or clefts (multiple clefts are out). In (8,9) second remnant moves within a phase, first is in-situ.

8. Jan podszedł do jakiegoś artysty na pewnym koncercie  
Jan approach to some artist on certain concert  
ale nie wiem (do) którego artysty \*(na) którym koncercie  
but not know (to) which artist (on) which concert

‘Jan approached some artist at some concert but not know which artist at which concert’

9. Juan leyó un libro sobre un político en una biblioteca, pero no sé  
Juan read a book about some politician in some library but not know  
(sobre) qué político \*(en) qué biblioteca  
about which politician (in) which library

**4. Phase deficiency interacts with prosodic ellipsis** in languages like Indonesian, where the v-phase is considered deficient (Aldridge 2008) because it prevents inner Argument extraction from an active  $\bar{v}$  (10). The inability to extract from  $\bar{v}$ , permits both remnants to be licensed as most prominent in-situ thus allowing P-omission in both (11), even though Indonesian does not allow P-stranding via clefting or wh-movement (Sato 2011).

10. \*a. Apa yang Ali mem-beli?  
what C Ali ACT-buy  
b. Apa yang di-beli (oleh) Ali?  
what C PASS-buy by Ali  
‘What did Ali buy?’

11. Esti bilang kamu bicara dengan seseorang tentang sesuatu yang penting di sini, tapi saya  
Esti say you talk with someone about something that important in here but  
tidak tahu (dengan) siapa (tentang) apa  
I NEG know (with) who (about) what  
‘Esti said that you were talking with someone about something important here, but I don’t know who you were talking with about what.’

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### Cumulative readings of *each*

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While cumulative readings of *every* have garnered some attention in the literature (Schein 1993, Kratzer 2000, Champollion 2009, 2010), cumulative readings of *each* have not been discussed much, if any. In fact, *each* is often assumed to only have distributive readings. We present experimental results showing that *each* in fact does have cumulative readings, although their availability is constrained. We argue that the constraints on cumulative readings of *each* can be made sense of under Tunstall’s (1998) DIFFERENTIATION CONDITION, an independent constraint on the use of *each*.

**Differentiation Condition:** *Each* is known to prefer wide distributive scope. For instance, (1a) with *each* prefers the inverse scope reading, unlike (1b) with *every*, which readily allows the surface scope reading. Tunstall (1998) proposes that this scope preference is due to the Differentiation Condition, which we restate as (2).

- (1)    a. A helper dyed each shirt.                                 b. A helper dyed every shirt.
- (2)    **Differentiation Condition (DC)**: A sentence containing *each NP* can only be true of event structures where each individual in the restrictor of *each NP* is associated with a subevent that can be differentiated from the other subevents in some way. The preferred way to differentiate the subevents is to have a one-to-one correspondence with the bearers of a thematic-role distinct from that of *each NP*.

As a consequence, the surface scope reading of (1a) is dispreferred; under this reading all the subevents involve the same agent. Under the inverse scope reading, the subevents can have different agents, and the DC can be satisfied. Thus, the inverse scope is preferred. *Every* is not subject to the DC. A nice thing about Tunstall's account is that it explains the fact that the preference for wide scope disappears in sentences like (3): Unlike in (1), the subevents of (3) can be differentiated by the resultative states (see Brasoveanu & Dotlačil 2015 for experimental support).

- (3) A helper dyed each shirt blue.

Assuming that the DC is an independent constraint on the use of *each*, we claim that *each* does have cumulative readings, but they are only observed if the DC can be satisfied. We present results from two experiments in support of this claim.

**Experiment 1:** Given the DC, a cumulative reading with *each* with a different QP should be possible, only when *each* takes distributive scope over yet another clause-mate QP. To see this concretely, consider (4) under the reading where *each sheep* takes distributive scope over *one customer*. Under this reading, the DC can be satisfied, if each sheep is associated with a subevent with a different customer. If *each* has a cumulative reading at all, it should surface here, i.e. each farmer sold at least one sheep, and each sheep was sold by at least one farmer.

- (4) Two farmers sold each sheep to one customer.                      (5) Two farmers sold each sheep.

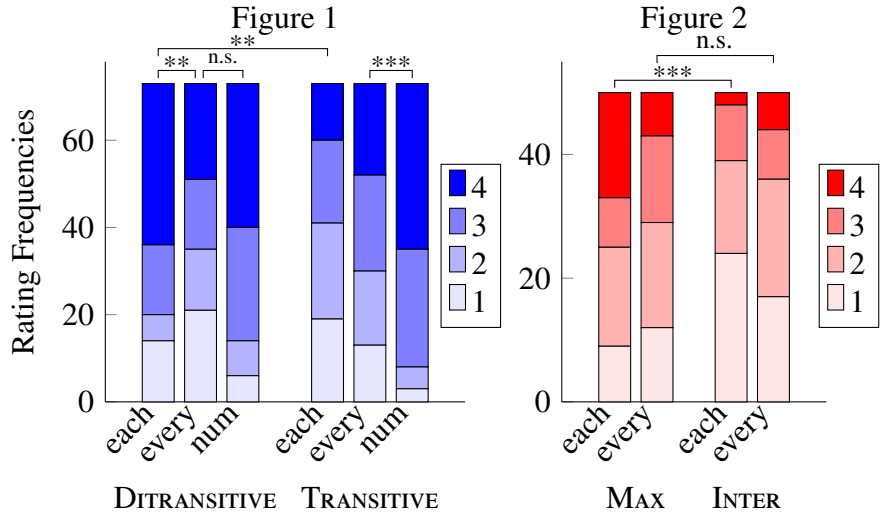
Contrast (4) with (5) without an additional QP. Here, the only way to satisfy the DC is to have an inverse distributive scope, so that each sheep is associated with two farmers. Then, the cumulative reading should be absent.

Experiment 1 looked at the acceptability ratings of these two types of sentences under the cumulative reading between the subject and object QPs. The ratings are given on a 4-point scale. We included versions of the sentences with *every* and a (bare) numeral. Numerals are known to have cumulative readings; thus providing a baseline. *Every* is known to sometimes give rise to cumulative readings, but is expected to be oblivious to the DC.

Each target sentence contained one of three determiners (EACH, EVERY, NUM(ERAL)) and a verb with one of two valencies (TRANSITIVE, DITRANSITIVE), and was paired with a picture describing a situation where only the cumulative reading is true. E.g. for (4), the picture contained a farmer who sold two sheep to different customers and another farmer who sold three sheep to different customers.

as illustrated in (7), while for (5) a picture without the customers was presented, as illustrated in (8). There were 6 sentence-picture pairs, and each subject saw only one version of each, and each condition only once. They were presented with 12 fillers.

Figure 1 summarizes the results from 78 native speakers of US English recruited on Amazon Mechanical Turk. They indicate that in the Transitive condition, (5), cumulative readings are less accessible with *every* than with numerals, and even less with *each*. In contrast, in the Ditransitive condition, (4), cumulative readings with *each* become more acceptable, in fact as acceptable as with numerals, while *every* and numerals are not affected

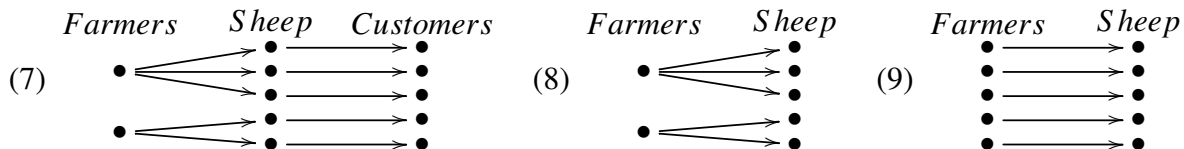


by this manipulation. The interaction effect is statistically significant ( $p < 0.0001$ ). This supports our claim that *each* does have cumulative readings, but their distribution is constrained by the DC.

**Experiment 2:** A prediction of the present analysis is that cumulative readings of transitive sentences with *each* should improve in situations where each subevent of selling a sheep has a different agent. We tested this prediction with another set of 60 native speakers of US English on Mechanical Turk. The task was as in Experiment 1, with a  $2 \times 2$  design crossing quantifier choice (*each* vs *every*) and situation type (MAX(IMAL) vs INTER(MEDIATE)). In the MAX condition, pictures depicted a situation where the agents (e.g. farmers) and the individuals in the restrictor of the object QP (e.g. sheep) were in one-to-one correspondence, as illustrated in (9). In the INTER condition, this mapping was one-to-many. The verb was always transitive as in (6). The results summarized in Figure 2 confirm our prediction that cumulative readings of *each* are more readily available in the MAX condition and that cumulative readings for *every* are not affected by the manipulation.

(6) Five farmers sold each sheep.

**Theoretical implications:** Schein (1998) and Kratzer (2000) derive cumulative readings from two assumptions: (i) that (agent) arguments are syntactically separated from verbs in a Neo-Davidsonian event semantics and (ii) that the propositional scope of all distributive quantifiers is prefixed by an existential quantifier over subevents. Since (i) is independent of quantifier choice and (ii) applies to both *each* and *every*, Kratzer and Schein predict that, everything else being equal, cumulative readings with *each* should be attested, although they do not discuss them. Our results show that this prediction is borne out and therefore support these analyses. They also show that these analyses would over-generate cumulative interpretations without the adoption of a principle that constrains the scope-taking options of *each*, like the DC. Finally, both Tunstall in her study of distributivity and Schein and Kratzer in their studies of cumulativity reached the conclusion that a proper analysis of quantification in English requires the adoption of a (Neo)-Davidsonian event semantics. Our results show that the argument from distributivity and the argument from cumulativity are not independent but instead strengthen each other.



## Why A-movement does not license parasitic gaps

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**1. Summary.** A well-known difference between A- and  $\bar{A}$ -movement is that only instances of  $\bar{A}$ -movement are capable of licensing parasitic gaps (1a–b).

(1)a. What did Kim file \_\_ [after grabbing \_\_]? b. \*The paper was filed \_\_ [after grabbing \_\_]. This paper argues that (1a–b) follows from Nissenbaum's (2000) theory of parasitic gaps and the idea that  $\bar{A}$ -movement involves abstraction over *choice functions*, and not individuals, as proposed by Sauerland (1998) for Weak Crossover. I show that this also explains Pylkkänen's (2008) observation that depictives are licensed like parasitic gaps, but with opposite requirements: depictives are licensed by A-movement or from base positions, but not by  $\bar{A}$ -movement.

**2. Nissenbaum (2000).** Nissenbaum proposes that parasitic gaps appear because intermediate successive-cyclic movement to the edge of  $vP$  and null operator movement inside an adjunct each trigger  $\lambda$ -abstraction over individuals. The resulting predicates are conjoined to form a single predicate (2), via Predicate Modification.

Two problems arise under this analysis, however:

- 1) operator gap adjuncts should be able to combine with argument-introducing heads, and license an operator gap from thematic positions as well, and
- 2) intermediate A-movement should be able to license parasitic gaps too. To deal with these issues,

Nissenbaum suggests that there is no intermediate A-movement and that the relevant adjuncts can only attach to maximal projections (see also Nissenbaum and Schwarz 2011).

**3. Pylkkänen (2008) on depictives.** Depictives can describe subjects as well as direct objects, but cannot modify indirect objects or complements of prepositions (3a–b).

- (3)a. Sam<sub>i</sub> gave Ted<sub>k</sub> coffee drunk<sub>i/\*k</sub>. b. Sam<sub>i</sub> danced with Ted<sub>k</sub> drunk<sub>i/\*k</sub>.

Pylkkänen (2008) observes that A-movement of these DPs (4a), including intermediate A-movement (4c), allows for depictives to be licensed, but not  $\bar{A}$ -movement (4b).

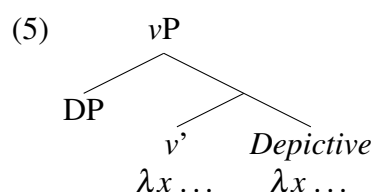
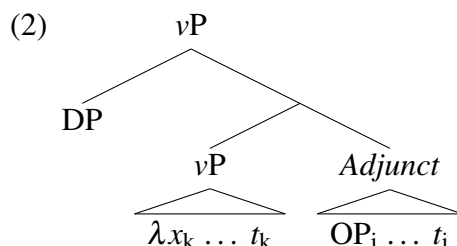
- (4)a. Ted<sub>k</sub> was danced with \_\_ drunk<sub>k</sub>. b. \*Who<sub>k</sub> did Sam dance with \_\_ drunk<sub>k</sub>?  
c. Ted<sub>k</sub> turned out [TP \_\_ to have been told \_\_ all the secrets drunk<sub>k</sub>].

Following Geuder (2000), Pylkkänen analyzes depictives as  $\langle e, st \rangle$  predicates, which attach to V or  $v'$  and form a conjoined predicate via Predicate Modification (see also Bruening 2015).

If A-movement involves an intermediate movement step to  $vP$  (cf. Legate 2003), triggering abstraction over individuals, A-movement can license depictives in the same configuration. As Pylkkänen points out, this analysis of depictives is analogous to Nissenbaum's treatment of parasitic gaps. However, the elements that license depictives are the *inverse* of those that license parasitic gaps. A solution might be to posit different landing sites for intermediate A- and  $\bar{A}$ -movement. But, as Pylkkänen notes, parasitic gaps can be licensed *inside of a depictive* (6).

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

I will show that such examples obey the same constraints as other parasitic gaps. (6) then makes clear that parasitic gaps and depictives do not differ in constraints on attachment, and must be able to be licensed in the same position. (The same point can be made with adjunct control, which has a similar distribution to depictives, if adjunct control is given a predicative analysis (Landau 2013:sec. 6.2).) I propose that A- and  $\bar{A}$ -movement involve the *same* step of intermediate movement, to the  $vP$  edge, and that there are no syntactic constraints on whether adjuncts can attach to maximal or intermediate projections. Instead, I suggest that what distinguishes A- and  $\bar{A}$ -movement is that they create *different predicates*, specifically because A-movement triggers  $\lambda$ -abstraction over individuals, while  $\bar{A}$ -movement abstracts over *choice functions*.



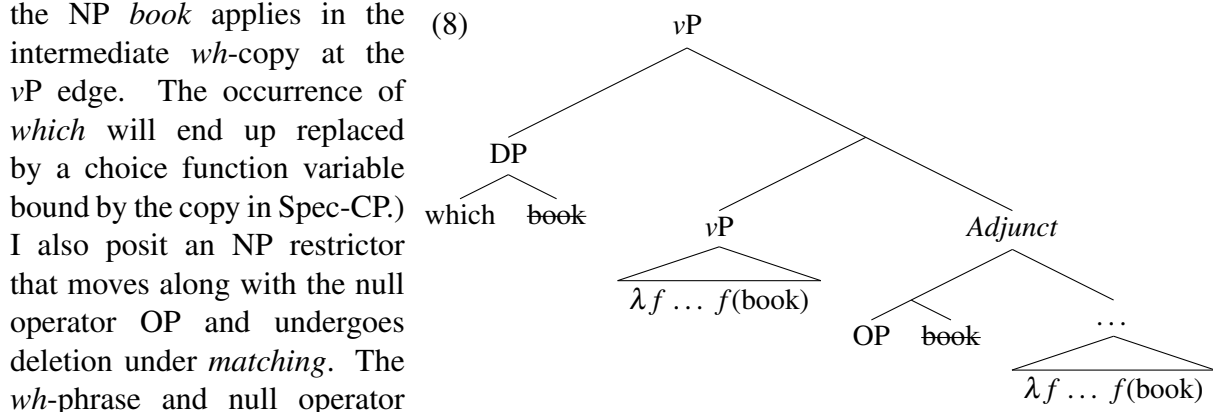
**4. Choice functions and  $\bar{A}$ -movement.** Following Sauerland (1998), Ruys (2000), and Abels and Martí (2010, 2011), I propose that  $\bar{A}$ -movement involves abstraction over *choice functions*. In this approach, all quantifiers quantify over choice functions. *Wh*-phrases, for instance, are existential quantifiers over choice functions (*cf.* Reinhart 1998). To interpret  $\bar{A}$ -movement chains in this way, two operations are necessary: 1) (distributed) deletion of the NP restrictor in the higher copy, and 2) replacement of the quantifier *which* in the lower copy with a choice function variable. This syntax and the associated LF are represented in (7).

(7) [which ~~book~~]  $\lambda f$ . do you like [ $f$  book]      **LF:**  $\lambda p.\exists f.(p = \lambda w.\text{you like } f(\text{book}) \text{ in } w)$

Such an account has advantages in dealing with split scope and conservativity (Abels and Martí 2010, 2011), as well as Weak Crossover. If pronouns are always individuals, then  $\bar{A}$ -movement cannot bind pronouns: it involves abstraction of the *wrong type* (Sauerland 1998; Ruys 2000). (See Ruys 2004 for how this approach can handle Weakest Crossover effects.)

**5. A choice function analysis of parasitic gaps.** If the choice function approach to  $\bar{A}$ -movement is correct, then A- and  $\bar{A}$ -movement trigger different types of abstraction and so create different predicates. Since conjunction requires predicates of the same type, Predicate Modification should only be possible with one in any configuration, but never both.

For parasitic gaps, I propose that operator movement, like other instances of  $\bar{A}$ -movement, creates abstraction over choice functions. The resulting predicate can be conjoined with a predicate created by intermediate  $\bar{A}$ -movement (8), just as in Nissenbaum (2000). (Deletion of the NP *book* applies in the



intermediate *wh*-copy at the  $vP$  edge. The occurrence of *which* will end up replaced by a choice function variable bound by the copy in Spec-CP.) I also posit an NP restrictor that moves along with the null operator *OP* and undergoes deletion under *matching*. The *wh*-phrase and null operator must have the same restrictor to ensure that the choice function picks out the same individual. Deletion under matching I adopt from the analysis of matching relative clauses (e.g. Carlson 1977; Sauerland 1998). In accordance with this, like matching relative clauses, parasitic gaps lack reconstruction effects for Condition A, as in the examples in (9a–b), and also for Condition C and variable binding, as extensively discussed by Nissenbaum (2000:Ch. 2, sec. 1.2).

- (9)a. Which pictures of himself<sub>i</sub> did John<sub>i</sub> sell \_\_ [before Mary had a chance to look at \_\_]?  
 b. \*Which pictures of himself<sub>i</sub> did Mary sell \_\_ [before John<sub>i</sub> had a chance to look at \_\_]?

**6. Recap.** A-movement does not license parasitic gaps because it triggers abstraction over individuals, and so creates a different predicate than operator movement. Instead, predicates formed by A-movement can conjoin only with predicates that are not the result of  $\bar{A}$ -movement, such as depictives (and possibly controlled adjuncts). In addition, such adjuncts should always be able to conjoin also with argument-introducing heads, just as observed. We then have a principled reason why the positions created by A-movement pattern with thematic positions, and  $\bar{A}$ -positions do not. Finally, I will show that this proposal easily accommodates examples like (6), and may shed light on the difference between A- and  $\bar{A}$ -movement with regard to reconstruction for Condition C as well as the ban on improper movement.

**7. Selected references:** Nissenbaum, J. 2000. *Investigations of covert phrase movement*. ○ Pylkkänen, L. 2008. *Introducing arguments*. ○ Sauerland, U. 1998. *The meaning of chains*.

## Concord Failures: Defective Intervention in the Nominal Domain

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**The puzzle:** Russian and Bosnian/Croatian/Serbian (BCS) exhibit nominal concord in  $\phi$ -features and case morphology. But numeral-containing nominal phrases (NCNPs) in these languages display a range of agreement patterns in Nominative environments. With low numerals (two, three and four), the range includes full agreement with feminine head nouns in BCS (1) (pitch accent is evidence for NOM.PL); number mismatch between the singular head and plural modifiers (2-4), accompanied by a gender mismatch in (2), and a case mismatch between the genitive head and nominative prenominal elements (2-3) or pre-numeral ones (4). With high numerals (five and up) we see either a case mismatch between the nominative prenumeral and genitive postnumeral elements (5) or full feature matching in (6), where all elements bear Genitive morphology in Nominative environments. Attention is restricted to Nominative here, although my analysis also accounts for the facts seen in Oblique environments (see Franks, 1995).

- |     |                                   |       |                  |                               |  |  |
|-----|-----------------------------------|-------|------------------|-------------------------------|--|--|
| (1) | ov-e                              | dvije | stär-e           | grân-e/*grânē                 |  |  |
|     | this-F.NOM.PL                     | two.F | old-F.NOM.PL     | branch-F.NOM.PL/GEN.SG        |  | (BCS)  |
|     | 'these two old branches'          |       |                  |                               |  | (full Nominative concord)                        |
| (2) | ov-a                              | dva   | ruzinav-a        | brod-a                        |  |  |
|     | this-N.NOM.PL                     | two   | rusty-N.NOM.PL   | ship.M-GEN.SG                 |  | (BCS)  |
|     | 'these two rusty ships'           |       |                  |                               |  | (prenominal Case, number and gender mismatch)    |
| (3) | èt-i                              | dve   | krasiv-ye        | zvezd-y                       |  |  |
|     | this-NOM.PL                       | two.F | beautiful-NOM.PL | star.F-GEN.SG                 |  | (Russian)  |
|     | 'these two beautiful stars'       |       |                  |                               |  | (prenominal Case and number mismatch)            |
| (4) | èt-i                              | dva   | krasiv-yx        | stol-a                        |  |  |
|     | this-NOM.PL                       | two   | beautiful-GEN.PL | table.M-GEN.SG                |  | (Russian)  |
|     | 'these last two beautiful tables' |       |                  |                               |  | (prenumeral Case and prenominal number mismatch) |
| (5) | èt-i                              | pjat' | krasiv-yx        | stol-ov                       |  |  |
|     | this-NOM.PL                       | five  | beautiful-GEN.PL | table-GEN.PL                  |  | (Russian)  |
|     | 'these five beautiful tables'     |       |                  |                               |  | (prenumeral Case mismatch)                       |
| (6) | ov-ih                             | pet   | star-ih          | grân-ā/brod-ova               |  |  |
|     | this-GEN.PL                       | five  | old-GEN.PL       | branch.F-GEN.PL/ship.M-GEN.PL |  | (BCS)  |
|     | 'these five old branches'         |       |                  |                               |  | (full Genitive concord)                          |

**Background:** The system I propose here derives a broad range of data that cannot readily be assimilated into analyses in which numerals assign Genitive (Babby, 1987; Franks, 1995; Rappaport, 2002; Pereltsvaig, 2010). Such analyses predict (1) to be impossible, and cannot account for Nominative on adjectives in (2) and (3). Analyses relying on the existence of paucal number as a remnant of Old Slavic dual (Zlatic, 1997; Belic, 2008; Pereltsvaig, to appear) invoke a paucal paradigm that is fully syncretic with a range of singular and plural forms and cannot account for agreement facts (see Šarić, 2014). Analyses on which NCNPs have variable internal structure have look-ahead problems (Giusti & Leko, 2005; Bošković, 2006). Pesetsky (2013) argues that Genitive is a part-of-speech (pos) feature of nouns that gets overwritten (due to a *One-Suffix Rule*) by Nominative upon merging of D, which has a Nominative pos feature. In Pesetsky's account, paucal numerals being a morphological realization of a number feature merged low accounts for the mismatch in number that occurs with paucals (4). Movement of the numeral to D makes postnumeral elements inaccessible for Nominative feature assignment, yielding the Case mismatches in (4) and (5). Full agreement in (1) can be derived if feminine paucal numerals are merged in the position of high numerals, and the movement to D does not occur, which raises the question of motivation for this movement. Finally, while accounting for most Russian facts, this analysis cannot account for Russian (3), or BCS (2) and (6).

**Analysis:** I build on assumptions from Pesetsky's analysis, motivating the movement of numerals to D by assuming that the BCS and Russian D bears a [+qu] quantificational feature that attracts numerals, as proposed for null D by Heycock & Zamparelli (2003). Crucially, I argue that merging a feature-defective element with a feature assigner can block further feature spreading and assignment, and that Pesetsky's *Feature Assignment* mechanism proceeds stepwise and is subject to a variant of Defective Intervention. I argue that nominal concord can fail, and in the case of such failure, the derivation doesn't crash but instead either default values are assigned (for  $\phi$ -features, as in Preminger, 2011) or Back-Up Percolation ensues (Norris, 2014). This conclusion reveals a novel parallel between the clausal and nominal domains, while providing an account of feature-sharing and feature-spreading and explaining complex cross-linguistic data in Slavic NCNPs. I assume  $\phi$ -features are merged

as separate projections in the nominal domain, with nouns entering the derivation numberless and merging with a number feature (Ritter, 1991 and subsequent work). As in Pesetsky (2013), the number feature (NBR) is merged lower than low adjectives, but in my analysis this feature is always present as nouns enter the derivation numberless. If merged with a plural feature, nouns can be morphologically realized as plural if a) NBR itself is not morphologically realized; or b)  $\phi$ -features of an overt NBR match those of the noun. Otherwise, the numberless noun is realized as singular (the morphological default), and the overt NBR is the morphological realization of plural. In BCS and Russian, paucal numerals are instantiations of overt NBR, and high numerals are heads of QUANTP that take NPs as their complements. Additionally, I assume Norris' (2014) *Feature Percolation Principles*, paraphrased in (7). Finally, I propose an extended version of Pesetsky's *Feature Assignment*, shown in (8) (extension in *italics*) and a blocking principle in (9):

- (7) **FPP**: All projections of a head have the same feature-value pairs as the head. Let  $\alpha$  be a head lacking a feature [F]. When  $\alpha$  merges with  $\beta$ , projecting  $\alpha\beta$ , if  $\beta$  bears a valued [F:val],  $\alpha\beta$  also bears [F:val].
- (8) **All-or-Nothing feature sharing**: Let [F:pos] be a part-of-speech feature on a head  $\alpha$  and  $\beta$  be a *non-defective* head. When  $\beta$  is merged with  $\alpha$ , [F:pos] is copied onto  $\beta$  and realized as morphology on all accessible lexical items *merged with a projection of  $\alpha$  which share all of  $\beta$ 's  $\phi$ -features*.
- (9) **Feature Assignment blocking**: Let [F:pos] be a part-of-speech feature on a head  $\alpha$  and  $\beta$  be a morphologically defective head. When  $\beta$  is merged with  $\alpha$ ,  $\alpha$  is blocked from copying its grammatical features onto  $\beta$ ; all projections of  $\alpha$  are rendered unable to copy [F:pos] on elements they merge with.

With these assumptions in place, the entire range of data in (1)-(6) (and all the facts from

Oblique cases, assuming POBL to be a P pos

feature) can be derived from numerals' feature [DNOM, N:pl, G:d]

specifications. Assuming paucals bear an unvalued gender feature that can only be valued [+feminine] and

gets a default value when the goal bears a M or N gender feature, full agreement in (1) is accounted for, as are

mismatches in (2) and (4), where the differences are due to adjectives sharing features with the most local goal they c-

command (NBR) or the projection of N they merge with. Assuming high numerals merge with plural nouns, and Russian high numerals

bear a default gender feature, while BCS ones are morphologically

defective, we derive (5) and (6). The difference between adjectives in (3) and (4) is also explained, and we get the correct prediction that no Nominative adjectives are allowed in post-numeral positions with Russian high

numerals. An outstanding question is that of GEN.SG morphology on the feminine head noun in (3). A diagram for (2) is in (10). As NBR cannot get its gender feature valued by agreeing with the noun, a default value is assigned.

As  $\phi$ -features of the numeral and numberless N don't match, N gets morphologically realized as singular. [NGEN] feature is assigned to all elements merged with a projection of N that match  $\phi$ -features of NBR (8). Adjectives

probe for  $\phi$ -features and agree with NBR. After the [+qu] feature of D attracts NBR, D assigns its DNOM feature (FA indicated by horizontal arrows) to QUANT and all elements merged with a projection of D that share the full

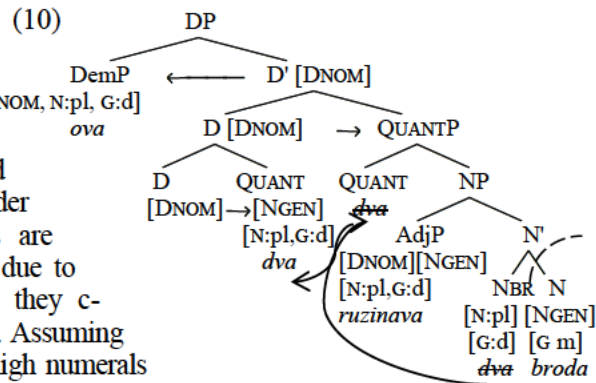
set of  $\phi$ -features with QUANT (a dashed line indicates the cut-off point of feature mismatch). The derivation proceeds similarly, with variation as discussed above, for (1)-(6), as well as the facts observable in Oblique environments.

**Consequences:** This account introduces a novel idea that morphological defectivity of the most local potential feature assignee can block an assigner from sharing its feature with all elements in the nominal domain.

**Empirically**, it explains the existing cross-linguistic patterns while avoiding the weaknesses of other analyses.

**Theoretically**, it shows a new parallel between nominal and clausal domains: failure to share and assign features due to the presence of defective elements is the nominal parallel to failure to agree due to defective intervention in the clausal domain, discussed by Preminger (2011), while also supporting Pesetsky's (2013) idea of case as a morphological realization of pos features.

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## Dedicated Self-Ascriptions in Egophoric Constructions

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The recent search for dedicated *de se* pronouns invites a related question: Do natural languages have dedicated forms that designate *predicates* such as verb phrases for use in property self-ascription? I will suggest that such forms may be found in ‘egophoric’ (also called ‘conjunct/ disjunct’) verbal systems. In such systems the ‘egophoric’ (or ‘conjunct’) verb form co-occurs with first person in declaratives and second person in interrogatives (I snored-EGO; Did you snore-EGO?); and a distinct (unmarked, I will suggest) form is found elsewhere (You/He snored; Did I/he snore?). Egophoric marking is also found in *de se* attitude reports (Syam[i] said that he[i] snored-EGO). Evidentials can license the egophoric form if the evidential source is coreferential with the subject (Syam snored-EGO EVID; “According to Syam[i], he[i] snored-EGO”). A variety of such systems are found scattered among the world’s languages (San Roque et al., 2015), subject to varying semantic conditions. In Newari (Sino-Tibetan), for example, the egophoric form is restricted to verbs of intentional action (Hargreaves 2005).

According to one common view, the egophoric marker is a special indexical indicating that the subject of the sentence refers to the ‘epistemic authority’ in the context. Focusing on Newari, I will present a slightly different account, following Wechsler and Coppock 2016. We introduce an agent parameter as a refinement on content (not context), which gives us a level of content that can serve as the object of an attitude *de se*: a centered proposition, i.e., a set of agent-world pairs. Egophoric marking identifies the subject of the sentence with that agent parameter in the content (not with a contextual ‘authority’ parameter). In a declarative statement, the assertor publicly commits to the centered proposition, which means that she commits to the belief that for any agent-world pair in that proposition, she may be that agent in that world. As a consequence the subject is normally a first person pronoun, but if authority for a commitment is abdicated as in an evidential construction then the subject refers to the evidential source instead. Questions should be asked in such a way that the addressee is able to commit to the centered propositions corresponding to the answers to the question (this is formalized by drawing upon recent proposals that track the discourse commitments of the interlocutors (Farkas & Bruce 2010; Krifka 2015)). Thus interrogative flip arises as a consequence of the status of the predicate as a self-ascribed property. This account also explains why licensing of the egophoric form is clause-bounded in Newari (Zu 2016). In ‘Mary[i] said that Syam said that she[i] snored’, Mary does not commit to the proposition that she snored, so the egophoric form does not appear.

## Postsyntactic Morpheme Reordering in Mari - Evidence from Suspended Affixation

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**Outline:** I show that (i) the morphological template in the noun phrase of Eastern Uralic languages should be derived on the basis of an underlying structure that is consistent with standard assumptions about the DP syntax and the Mirror Principle by postsyntactic reordering operations and (ii) the interactions of these processes with a deletion process called *Suspended Affixation* (SA) provide new insights on the derivational nature of postsyntax. SA generally deletes the right edge of non-final conjuncts under recoverability. In Mari (unlike in Turkish), SA applies to underlying rather than surface structures. I show that only a derivational account in terms of ordered postsyntactic operations makes the correct predictions concerning the surface order of morphemes *and* the ability of each morpheme to delete under SA. In particular, I show that, in some cases, only a Duke-of-York derivation captures the facts adequately. This, as it stands, provides a strong argument for derivational theories of postsyntax.

**The nominal template:** The nominal template of Eastern Uralic languages is remarkable wrt. to a number of properties, two of which are (i) Local cases precede possessive affixes whereas structural cases follow them. (ii) Number occurs in various positions: Either adjacent to the stem or to the right of the possessive affix (see Luutonen (1997), McFadden (2004)) (ex. from Mari).

- |  |  |
|--|--|
| (1) pasu-vlak-ešte-na<br>garden-PL-INESS-1PL.POSS<br>'in our gardens' (INESSIVE) | (2) pasu-vlak-na-m<br>garden-PL-1PL.POSS-ACC<br>'our gardens (ACCUSATIVE)' |
| (3) pasu-vlak-na<br>garden-PL-1PL.POSS 'our gardens'                             | (4) pasu-na-vlak<br>garden-1PL.POSS-PL 'our gardens'                       |

These alternations raise the question whether the nominal template of Mari can be deduced to the standardly assumed order of affixes as predicted by the Mirror Principle (Baker (1985)).

**Suspended Affixation:** The nominal coordinator /den/ in Meadow Mari enforces a process called Suspended Affixation typically known from Turkish languages (see e.g. Kabak (2007)). This process deletes the right edge of non-final conjuncts if it is identical with the one of final conjunct as in (5). As (6) and (7) show, there is no requirement for the remnant to be an otherwise attested form which suggests a deletion analysis (cf. Ershler (2012)).

- |   |   |   |
|---|---|---|
| (5) Pij den kajek-vlak-em<br>dog and bird-PL-ACC<br>'dogs and birds.' | (6) memna den nunem<br>us.??? and them.ACC<br>'us and them' | (7) 1.PL.NOM = /me/<br>1.PL.ACC = /memnam/<br>1.PL.GEN = /memnan/ |
|---|---|---|

In Turkish languages, SA has a strong requirement that only right edges can be deleted (8). Deletion of non-final affixes while maintaining the final ones is ungrammatical (9):

- |   |  |
|---|--|
| (8) kasaba ve kent-ler-imiz-den<br>town and city-PL-1PL.POSS-ABL<br>'from our towns and villages' | (9) *kasaba-dan ve kent-ler-imiz-den<br>town-ABL and city-PL-1PL.POSS-ABL<br>'from our towns and villages' |
|---|--|

In Mari, however, we find cases where the right-edge constraint can be violated. Case markers can be deleted regardless of whether they follow or precede the possessive affix in linear order:

- |  |   |
|--|---|
| (10) Pörjeng oksa-m tud-en aka-ž den iza-m-lan pua.<br>Man money-ACC 3SG.GEN sister.3SG and brother-1SG-DAT give-3SG.PRES<br>'The man gives money to her/his sister and my brother.' | (11) Üder mej-en uše-m den tej-en süm-ešte-t.<br>girl 1SG-GEN mind-1SG and 2SG-GEN heart-INESS-2SG<br>'The girl is in my mind and in your heart.' |
|--|---|

The dative case in (10) is at the right edge of the conjuncts. Hence, deletion is expected. The inessive case in (11), however, is *not* at the right edge as it is followed by the possessive. It can still be deleted. Also, the plural morpheme can be deleted in cases where it precedes the possessive affix in linear order. In (12) the first conjunct can have a plural interpretation.

- (12) A-vlak tud-en sad-še den memna-n pasu-vlak-ešte-na mod-et  
 child-PL 2PL-GEN garden-2PL and 1PL-GEN field-PL-INESS-1PL play-PRET.3PL  
 'The children played in your gardens and in our fields.'

These data raise the question whether SA can receive a unified analysis in Turkish and in Mari.

**Analysis:** The two questions raised at the end of the previous sections can receive a unified answer. If we assume that the nominal template in Mari is indeed derived on the basis of an underlying representation that resembles the standard order of functional projections, we can give a simple answer to the question why it behaves differently wrt. to SA: It is some kind of underlying representation that serves as a basis for the application of SA.

The syntactic output structure looks as follows:  $[_{KP} [_{DP} [_{NumP} NP Num ] D ] K ]$ . This serves as the input to postsyntactic operations needed to derive the full pattern of affix order and whether affixes are deletable: (i) D-Lowering (D-L): Operation that lowers D to left-adjoin to Num. Applies on the basis of hierarchical structure (see McFadden (2004)). Derives (4) on the basis of (3). D-L is optional. (ii) Suspended Affixation (SA): Deletes right edges of KPs of a conjunct in coordination if the features are recoverable on the final conjunct. Applies on linearized structures. (iii) D-Metathesis (D-M): Puts D to the right of K if K has a local case feature. This metathesis rule can (for some speakers) even apply over a possibly intervening Num-head. D-M applies on linear structures. Derives the difference between (1) and (2). D-M is obligatory. Also, we need (v) linearization (LIN) and (vi) vocabulary insertion (VI) as in Arregi & Nevins (2012) (A&N).

- (13) D-L:  $[_{KP} [_{DP} [_{NumP} NP Num ] D ] K ] \xrightarrow{D-L} [_{KP} [_{DP} [_{NumP} NP [_{Num^0} D Num ] ] t ] K ]$

- (14) D-M:  $NP D (Num) K_{local} \xrightarrow{D-M} NP (Num) K_{local} D$

The order of operations is as following: (16)  $D-L \succ LIN \succ SA \succ D-M \succ VI$

**Derivations:** SA deletes the right edge of the whole complex at its point of application. Thus, the order of operations in (16) is crucial to give the correct results in terms of (a) morpheme order and (b) ability to delete under SA. D-L precedes SA and thus changes of order induced by D-L have an effect on SA. After D-L, Num follows D and can thus be deleted by SA irrespective of the (non-)identity of D in both conjuncts (12). If both D-L and D-M apply, this creates a Duke-of-York derivation (Pullum 1976) as D-M undoes the effects of D-L. However, SA shows that there was an intermediate stage of the derivation where D preceded Num. D-M however comes too late to affect SA. Thus, K can be deleted although it is followed by a D in (11).

**Further Evidence:** The established order of operations can be tested against evidence from allomorphy and suppletion. E.g., the illative case marker (-š vs. -ške) is sensitive to whether it is followed by D or not. This is expected given the order in (16) as VI follows D-M. Pronominal stem suppletion as in (7) is sensitive to features deleted by SA. This is unexpected and possibly creates an order paradox as  $VI \not\succ SA$  if  $SA \succ D-M$  and  $D-M \succ VI$ . This can be solved by refining the definition of SA saying that SA marks affixes for non-insertion rather than deleting them.

**Discussion:** (i) SA is analyzed as deletion (Ershler 2012, here) or multidominance (see Broadwell 2008) in different languages. Thus, the situation is the same as with Right Node Raising, where it was argued that we need both accounts (Larson 2012, Barros & Vicente 2011). (ii) The need of intermediate levels of representation for the application of a SA provides a clear argument for a derivational nature of the postsyntactic module as laid out in A&N. In the analysis, the structure that serves a basis for SA can neither be reduced to the syntactic output nor the surface string. It is thus unclear how representational theories could capture these facts at all.

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**Data:** Embedded inverted questions (EIQs) in English dialects (as in 1), recomplementation in Spanish (in 2) and Germanic EV2 (in 3) share a wide range of syntactic characteristics: highly restricted distribution with respect to matrix verbs they can combine with; sensitivity to matrix negation, modality and interrogation; lack of indexical shift; sequence of tense; unavailability of fronting the embedded clause; availability of speech act adverbs, discourse markers scoping within the embedded clause as in (3) and hanging topics; root-like word order (V-to-C) or other overt marking in the C-domain:

- No analysis accounting for both the syntax and distribution of these constructions has been found for them severally or as a group; most accounts rely on some definition of “assertion” which cannot be the whole story based on the data in (1) and evidence for EV2 under semifactives in Swedish. They are not selected by the matrix verb, else modality in the matrix clause would not affect their distribution, yet they are clearly subordinate to the matrix clause because the bound reading in (4) is available. Also, not all root phenomena are permitted: in (5b) “huh”, which expresses the speaker’s demand for an immediate answer, is unavailable.

- These constructions, which I term *quasi-quotes*, also share a wide range of semantic and pragmatic characteristics which are intermediate between indirect and direct speech reports (ISRs and DSRs). Unlike ISRs, they all give rise to the presupposition that the proposition or question contained in the embedded clause was discussed in the original discourse—they are referential in that they must refer to an extant prior speech act. Also, both their form *and* content may be questioned, as in (6)—note that B' is not possible in response to the equivalent ISR:

- Quasi-quotes disambiguate between perspectives in a way that ISRs do not (ISRs allow both subject and speaker readings), but here the group of constructions diverges. English EIQs and Spanish recomplementation clauses must be interpreted with respect to the original speaker (the matrix subject), whereas German/Mainland Scandinavian (MSc) EV2 clauses reassert the perspective of the current speaker. This split is also seen in the interpretation of embedded imperatives: the subject of an embedded imperative is interpreted as the original addressee in English/Spanish but the current addressee in German/Swedish (cf. also Kaufmann 2015).

The data show that quasi-quotes are embedded representations of speech acts which feature root-like syntax (verb movement and the availability of (some) left-peripheral material) and the disambiguation of perspectives. However, they are not independent speech acts themselves; there is

no obligation for the addressee in the reporting context to answer an EIQ and root phenomena which necessitate a response from the addressee are blocked.

**Proposal:** In the spirit of McCloskey's (2006) split-CP analysis of EIQs, quasi-quotes contain an Illocutionary Act Projection (IAP) above CP which is absent in ISRs. The IA head is a nominalising head, selecting the embedded question to produce a referential nominal-like utterance (cf. Kastner 2015 on factives, which also share many key characteristics with quasi-quotational constructions). The presence of the IAP permits movement of verbs and other elements into the left periphery because, unlike a selecting matrix verb, the functional IA head does not itself satisfy the relevant features on C°. However, the DP-like structure of IAPs accounts for the islandhood of quasi-quotes, the fact that they must refer to an equivalent extant utterance in the relevant original discourse and the fact they can directly modify overt content nouns. It is also proposed that the IAP contains in its specifier a syntactic representation of the original discourse participants and their relationship which is analogous to the possessor DP in a possessive construction. This is reminiscent of Portner's (2005) proposal that embedded contexts affect selection and semantic composition of non-speaker-oriented embedded clauses, but postulating a syntactically present perspectival index to which attitudinal elements in quasi-quotes can orient avoids the complexity and some of the stipulations of Portner's account with respect to the disambiguation of perspectives, as well as accounting for the differences in the syntax of quasi-quotes versus ISRs and DSRs. The effect of the syntactic presence of this perspectival index is that covert arguments and attitudinal elements in its scope must shift uniformly to the relevant speech context, hence quasi-quotes are not ambiguous in the way that ISRs can be. As with 'typical' indexical shifting triggered by monster operators (cf. Shlovsky & Sudo 2014), languages vary as to the type of perspectival index available: in English/Spanish the perspectival index represents the original discourse participants. German/MSc perspectival indices represent and so reinforce the current speaker's perspective.

(7) [<sub>IAP</sub> [ CENTRE OF EVALUATION ] [<sub>IAP'</sub> [<sub>IA</sub> *please* ] [<sub>CP</sub> [<sub>C</sub> *would* ] [<sub>TP</sub> *you help me*]]]]]

The Centre of Evaluation is obligatorily null in English but it may be pronounced, e.g. as a Vocative phrase, in other languages which have both quasi-quotes *and* shifting of second-person indexicals in embedded clauses, such as Akɔɔse (Bantu, cf. Aikhenvald 2008) or which have logophoric pronouns, such as Mupun (Chadic, cf. Frajzyngier 1985). Hence, root phenomena which pertain to the attitudes of the interlocutors are embeddable in English, Spanish etc. as they can be shifted, but discourse particles expressing calls to respond (such as *huh*) cannot because a clash in interpretation occurs: the current addressee is not expected to respond to the EIQ but *huh* requires her to.

How then do quasi-quotes attach to the matrix clause? It is proposed that a linker head like that of den Dikken and Singhapreecha (D&S; 2004) selects for an IAP (nothing larger) and identifies the IAP as the content and shape of the true complement to the matrix verb, a (usually null) content nominal such as 'question'. The linker head is shown in (8) and is named ToWit° to reflect one possible overt instantiation of it (in 9):

(8) [<sub>TP</sub> [<sub>DP</sub> *Jo*][<sub>T'</sub> [<sub>T</sub> ] [<sub>VP</sub> [<sub>V</sub> *asked*][<sub>DP</sub> [<sub>D'</sub> ] [<sub>ToWitP</sub> [<sub>NP</sub> *question*][<sub>ToWit'</sub> [<sub>ToWit°</sub> *link*][<sub>IAP</sub> *could she come*]]]]]]]]]

(9) The gentleman<sub>i</sub> asked a question, **namely/to wit**, what could he<sub>i</sub> do to assist?

Like D&S's linker, ToWit° facilitates the interpretation of the EIQ as presupposed and shifted; this structure also explains why EIQs cannot be fronted as they are referential entities identified with the nominal complement rather than predicational. Dialectal variation in quasi-quotes rests on the availability of a null ToWit°; EIQ dialects like AAE can leave functional heads like ToWit° unpronounced where standard Englishes cannot.

**Conclusion:** Illocutionary force when understood as the encoding of perspective and attitude is embeddable but calls for response are not. Languages vary on whether ToWit° may be overt (Swedish) or covert (English EIQs), which can affect the distribution of IAP, and whether perspective markers are fixed indexicals (e.g. Cuzco Quechua) or shiftable (languages with quasi-quotes).

**Selected references:** den Dikken & Singhapreecha (2004). *Complex Noun Phrases and Linkers*. Kastner (2015). *Factivity mirrors interpretation*. Krifka (2014). *Embedding illocutionary acts*. Portner (2005). *Instructions for Interpretation as Separate Performatives*.

## Fake indexicals: Germanic child care and gendered relatives

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**Synopsis** This paper shows, based on the distribution of bound indexicals in four Germanic languages, that binding is not sensitive, nor can it be assumed to be driven or mediated by functional heads as postulated in many current Agree approaches to binding (Reuland 2001, 2005, 2011, Heinat 2006, Chomsky 2008, Kratzer 2009). Instead data are provided that argue for a return to the traditional view that binding requires a direct dependency between the antecedent and the variable (Hicks 2006, 2009, Schäfer 2008), and that this dependency is best formalized as Reverse Agree (Wurmbrand 2011, 2012, Zeijlstra 2012) plus the concept of feature sharing proposed in Pesetsky and Torrego (2007).

**Fake indexicals** Bound variable [bv] interpretations are generally available for 1<sup>st</sup>/2<sup>nd</sup> person pronouns in constructions such as *Only I did my best* (*my* is not referential but varies with the alternatives of *only*). Such bound fake indexicals [FIS] where 1<sup>st</sup> person is not interpreted as the speaker are, however, restricted in relative clauses, (1): English and Dutch [E/D] allow them, whereas German and Icelandic [G/I] prohibit them (*my* can only be referential in (1b,d)). Kratzer (2009) proposes a morpho-syntactic spell-out approach for (1a,b) in which the feature sets of the relative pronoun (WH.F.SG), where F=3<sup>rd</sup> person, T, *v* (1SG), and the POSS(essor) unify, leading to conflicting 1/3 feature specifications on T and POSS, which cannot be realized in G. In E, markedness rules allow ignoring certain features, and the spell-out dilemma of e.g., 1.3.SG can be resolved in favor of person for POSS (1.SG—*my*) and in favor of gender for verbs (3.SG—*takes*.3.SG). This account does not address why only some languages have such markedness rules, in particular not why D patterns with E and I with G.

- (1) a. *I am the only one who takes care of her/my son.* ✓bv  
 b. *Ich bin der einzige, der seinen<sup>✓bv</sup> / meinen<sup>\*bv</sup> Sohn versorgt*  
 I am the.M.SG only.one who.M.SG his<sup>✓bv</sup> / my<sup>\*bv</sup> son take.care.of.3.SG  
 ‘I am the only one who takes care of his/my son.’ [based on Kratzer 2009: 191, (5)]  
 c. *Ik ben de enige die m’n best gedaan heeft* ✓bv  
 I am the only.one who my best done has.3.SG  
 ‘I am the only one who has done my best.’ [Maier and de Schepper 2010: 4, (11)]  
 d. *Ég er sá eini hérna sem getur séð um börnin sín<sup>✓bv</sup> / mín<sup>\*bv</sup>*  
 I am DEM only here that can.3.SG see about children SELF<sup>✓bv</sup> / my<sup>\*bv</sup>  
 ‘I am the only one here who can take care of his/my children.’ [G. Harðarson, p.c.]

**Direct licensing by AC** Mediated Agree approaches crucially relies on *v*/C/T licensing pronouns, rather than involving a dependency between the actual antecedent [AC] and the bindee. Alternations with identical inflectional heads but different word orders in G show, however, that the crucial relation is c-command between the AC and the bindee: a bv interpretation is only possible in (2) when the AC c-commands the pronoun.

- (2) a. *weil {unser<sup>\*bv</sup> Sohn} nur uns<sup>AC</sup> {unser<sup>✓bv</sup> Sohn} versorgt*  
 since {our.NOM son} only us.ACC {unser<sup>✓bv</sup> Sohn} take.care.of.3.SG  
 ‘since our son is only taking care of us.’  
 b. *der Tag an dem {unser<sup>\*bv</sup> Sohn} nur uns<sup>AC</sup> {unser<sup>✓bv</sup> Sohn} versorgt hat*  
 the day on which {our.NOM son} only us.ACC {unser<sup>✓bv</sup> Sohn} taken.care.of has  
 ‘the day on which our son took care of only us/only we were taken care of by our son’

Further evidence for a direct AC–bindee dependency comes from inversion in specificational contexts. In both E/D, FIS are impossible when the relative DP<sub>REL</sub> precedes the matrix pronoun as in (3b,c). Dutch is particularly important here since the DP<sub>REL</sub>—pronoun order does not change matrix agreement—the subject remains the 1.SG pronoun which the matrix verb obligatorily agrees with. Yet despite this agreement, a FI is not licensed but vb can only be achieved with a 3<sup>rd</sup> person pronoun.





- (3) a. *I am the only one who has done my<sup>✓bv</sup>/her<sup>✓bv</sup> best.*  
 b. *[The only one who has done \*my<sup>\*bv</sup>/her<sup>✓bv</sup> best] is me<sup>AC</sup>.*  
 c. *[De enige die \*m’n<sup>\*bv</sup> / z’n<sup>✓bv</sup> / haar<sup>✓bv</sup> best gedaan heeft ] ben ik*  
 [the only.one who \*my / his / her best done has.3.SG ] am.1.SG I  
 ‘The only one who has done her best is me.’ [P. Fenger, p.c.]

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(4) a. %*I am the only one, who I have.1.SG given my best.* German: ✓bv  
 b. \**The only one who I have.1.SG given my best am I.* \*doubled subject indexical  
 c. *I am the only one, that pro.1.SG did.1SG my best.* Icelandic: ✓bv  
 d. \**The only one, that pro.1.SG did.1SG my best am.1.SG I.* \*indexical agreement  
 e. *The only one, who/that did.3SG her best am.1.SG I.* ✓vb

**E/D vs. G/I** As shown in the table below, the crucial difference between the two language groups lies in the morphological make-up of the head DP of the relative clause (in G also the relative pronoun): DP<sub>REL</sub> shows gender distinctions in the singular in G/I but not in E/D.

I propose *Max F-Share*—Agree relations affecting morphological features obligatorily share (Pesetsky and Torrego 2007) all features specified on both elements. The first

(5) a. *I am the only one who gives* POSS *best*  
 b.  $i\varphi$ : 1.F.SG  $\varphi$ : .#: .#:  $\varphi$ :  $\pi$ .#.:  $\Rightarrow$  (3).F.SG G  
 $i\varphi$ : 1.F.SG  $\varphi$ : #: [+HUMAN]  $\varphi$ :  $\pi$ .#.:  $\Rightarrow$  (3).F.SG or 1.SG E

# Extractability in Agreeing/Non-Agreeing Modifier Constructions

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This paper argues that the agreement requirement on left branch extraction of adjectives (Bošković 2005, 2009, 2013) and the agreement requirement on adjective stranding (Bošković 2009, c.f. Hale 1981) can be unified and deduced from the Labeling Algorithm (Chomsky 2013) (LA).

While Bošković (2005, 2009, 2013) argues that LBE of adjectives is possible only in languages without articles, he also notes an additional requirement: such LBE requires A/N agreement. Thus, it is possible in Russian and Serbo Croatian (SC), article-less languages with A/N agreement, but not in Japanese, Korean and Chinese, article-less languages without A/N agreement. Furthermore, even in SC only agreeing adjectives can undergo LBE. Both *braon* and *smedja* mean ‘brown’ but only the latter agrees with the noun, and only the latter can extract (*braon* is a frozen form).

- (1) a. \***Braon**<sub>i</sub> je on kupio [t<sub>i</sub> kuću].  
           brown is he bought house  
           ‘He bought a brown house.’  
       b. **Smedja**<sub>i</sub> je on kupio [t<sub>i</sub> kuću].  
           brown.acc.fem.sg is he bought car.acc.fem.sg

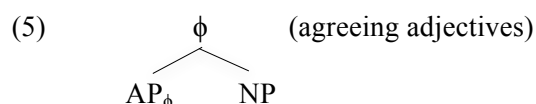
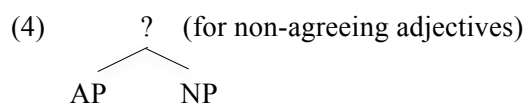
There is a similar requirement on adjective-stranding extraction. Consider for example Warlpiri (2). Only in the discontinuous ‘the small two children’ in (2a) the number and the Case ending must be present on both parts of the split NP; i.e. only in this case A/N agreement in this respect is enforced (see Bošković 2009 for similar cases of this type from other languages).

- (2) a. kurdu- jarra rlu ka- pala maliki wajilipi-nyi wita- jarra- rlu.  
           child dual erg pres dual dog chase-nonpast small dual erg  
           ‘The two small children are chasing a dog.’  
       b. maliki ka- pala wajilipi-nyi kurdu wita- jarra- rlu.  
           dog pres dual chase-nonpast child small dual erg (Hale 1981)

I unify the two phenomena in question as follows:

- (3) The adjective and the noun can be split under extraction if and only if they agree.

I also show that the generalization in (3) can be deduced from LA. In Chomsky (2013), when two maximal projections merge, there are two ways of determining labeling: *i*: One of them moves away (since traces are ignored for labeling) (LA *i*) or *ii*: The phrases in question undergo feature sharing, i.e. agreement (LA *ii*). Now, Hornstein and Nunes (2008), Hunter (2010) and Bošković (in press) among others, argue that the adjunct configuration does not need labeling for interpretation, as in (4) (represented as ?, following Bošković in press; we would have here <AP, NP> under Chomsky’s 2013 pair-merge view of adjunct configuration; this would also work for the proposed analysis, since what is important for us is that neither AP nor NP projects here by itself, as discussed directly below). I make a somewhat similar but stronger proposal: For adjunct interpretation, it is not possible for one element to project (this fits well semantically with the rule of restrictive modification, where both elements essentially contribute equally semantically to the newly created element). (4) is then the representation of the case with non-agreeing adjectives; what is important is that it is not the case that one of the elements in question projects. (5), on the other hand, is the representation of an agreeing adjective case: here labeling is established through agreement. However, as in (4), it is not the case that one of the relevant elements projects by itself.



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While both (4) and (5) conform to the condition on adjunct labeling proposed above, their syntactic behavior is predicted to be different. (4) does not allow any extraction of AP or NP: if one element moves, since traces are ignored for the purpose of labeling the remaining element will project a label given LA *i*, which is disallowed here, as discussed above. In (5), such movement does not create a new label, hence movement is allowed. (Note that I here assume that labeling can occur as soon as the relevant configuration is created, as crucially argued in Bošković in press, contra Chomsky 2013 (if this were not possible, configurations where for example both the head and its Spec/complement move would be disallowed)).

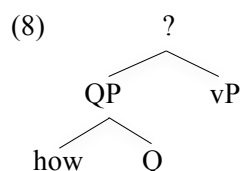
The above deduces the generalization in (3): non-agreeing modifiers create configurations like (4), where neither element can move; on the other hand, agreeing modifiers participate in the configuration in (5), which allows movement.

The deduction of (3) can also be extended to account for the Baker, Aranovich and Golluscio 2005's generalization that adjectives can be stranded under N-incorporation only if the language has N/A agreement. The stranded adjective in Mayali (6) bears a feminine prefix, agreeing with the incorporated noun *yaw* 'child.' However, in Mapudungun (7), the stranded adjective does not decline and the stranding is prohibited.

- (6) Al-wakadj ka-yaw-karm-e al-daluk.  
 Al-wakadj 3S/3O-child-have-NP FEM-female.  
 'Al-wakadj has a female child.' (adjective stranding, Mayali; Evans 1997:400)
- (7) \*Pedro ngilla-waka-y küme.  
 Pedro buy-cow-IND.3sS good  
 Intended: 'Pedro bought good cow(s).' (Mapudungun; Harmelink 1992:132)

(6) has an agreeing adjective, hence the configuration in (5): N-incorporation is then allowed in the same manner as movement in SC (1b) and Walpiri (2). (7) however contains a non-agreeing adjective: N-incorporation is then prohibited in the same manner as movement in SC (1a) (it would create a labeled object, in particular, labeled as AP, which, as discussed above, is disallowed here).

Under the current analysis, a question arises regarding clausal adjunct movement, since these elements generally do not agree, as in *how did John leave?*. Following Stepanov 2001 (see also Hagstrom 1998 and Bošković in press), I argue that *wh*-adjuncts are merged differently from non-*wh*-adjuncts due to the presence of the Q-morpheme, which is implemented as merging them with the Q.



In (8), *how* itself can move as its movement does not affect the label of <QP,vP>.

This analysis is extended to other cases of operator-like movement of adjuncts, like topicalization of adjuncts, which I argue involves Top/TopP in the same manner that *wh*-movement involves Q/QP. Crucially, I will show that the analysis deduces a puzzling property of scrambling discussed in Miyara (1982), Saito (1985), Bošković and Takahashi (1998), among others: true scrambling of adjuncts is not possible in Japanese. As Saito (1989, 1992) shows, scrambling in Japanese does not involve operator movement; it is in fact semantically vacuous. There is then no head/phrase corresponding to Q/QP from (8) with scrambling. Since in their base-position adjuncts are merged through an unlabelled configuration, they are then not allowed to scramble.

In summary, the paper establishes the generalization that an adjective and a noun can be split under extraction only if they agree, and provides an account of the generalization within the labeling system. The account is also extended to the well-known ban on scrambling of adjuncts in Japanese.

## Clitic dissimilation and dependent case

**Summary:** Baker (2015) suggests that the theory of dependent case—that case is assigned based on the structural relationship between nominals—is essentially a formulation of the idea that morphological case functions to differentiate nominals. This paper provides novel evidence for this claim from the clitic system of Yimas (Lower Sepik; Papua New Guinea). In Yimas, grammatical relations are encoded on a series of optionally doubled clitics; the DPs they double are morphologically unmarked. Because clitic doubling is optional, there may be fewer clitics on the verb than total DPs in the syntax. Crucially, the morphological form of a given clitic covaries with the total number of clitics, even when the sentence-level syntax is held constant: the realization of a clitic is thus *dependent on its clitic environment*. I argue that this context-dependence is underlyingly a *dissimilation process*. Clitic dissimilation is triggered whenever the structure would otherwise contain multiple morphosyntactically indistinguishable clitics; this arises whenever multiple DPs are clitic doubled, since DPs in Yimas are morphologically invariant themselves. The link to dependent case comes from the parallel between the distribution of clitic forms and that of dependent case on nominals (Marantz 1991, a.o.), in that both are controlled by morphosyntactic context, albeit in different structural domains. The strength of this parallel reveals that dependent case is also fundamentally a dissimilation process.

**Fundamental observation:** The clitic forms are drawn from three classes: A, B, and C. When all the DPs in the syntax are clitic-doubled, the clitics have a distribution strongly reminiscent of absolutive, ergative, and dative case on nominals: class-A clitics reference objects and intransitive subjects (~ABS), class-B clitics reference transitive subjects (~ERG), and class-C clitics reference indirect objects/causees (~DAT) (1).<sup>1</sup> However, when one or more clitics are missing, *B and C fail to surface*. In (2b)-(3b), the direct object is not clitic-doubled: in (2b), a transitive subject, which we might expect to be referenced by a B clitic, is instead referenced with A; similarly, in (3b), a causee that would otherwise be doubled with C also surfaces as A.

- (1) a. **pu-wat**      b. **pu-n-tay**      c. uraŋ      **k-ka-tkamr-akn**  
       **3PL.A-go**      **3PL.A-3SG.B-see**      coconut.6      **6S.A-1SG.B-show-3SG.C**  
       ‘They went.’      ‘He saw them.’      ‘I showed him the coconut.’
- (2) a. **na-kay**-cay      b. Mitchell **ipa**-tay  
       **3SG.A-1PL.B-see**      Mitchell **1PL.A-see**  
       ‘We saw him.’      ‘We saw Mitchell.’
- (3) a. tpuk      **ka-ka-na-tmi-amnt-akn**      b. irwa **na**-mpu-tmi-ampat  
       pancake.10      **10S.A-1SG.B-DEF-CS-eat-3SG.C**      mat.9      **3SG.A-3PL.B-CS-weave**  
       ‘I made **him** eat it (a pancake).’      ‘They got **her** to weave a mat.’

**Analysis:** I propose that the class-A clitics have an *elsewhere* distribution (i.e., are default forms), surfacing wherever class-B and C clitics cannot. Moreover, clitics are by default class-A as a result of clitic doubling (movement of a pronominal D<sup>0</sup>; e.g., Uriagereka 1995); this accounts for the morphological identity between the A-clitics and the pronominals (boxed) (4).

- (4) a. **kapwa**      taŋka-mpi      **kapwa-wat**      b. **ipa**      wara      **ipa-na-amn**  
       **2DU**      where-ADV      **2DU.A-go**      **1PL.A**      what      **1PL-DEF-eat**  
       ‘Where have you two gone?’      ‘What do we eat?’

Though all clitics originate as class-A, they are often realized instead as class-B or C. I propose that this is the result of *clitic dissimilation* (5), which arises due to a general anti-identity

<sup>1</sup> All examples are from Foley (1991). Clitics are bolded, and are additionally boxed when under discussion.  
**Abbreviations:** A = class A, B = class B, C = class C, ABS = absolutive case, CS = causative, DAT = dative case, ERG = ergative case, NEG = negation, POT = potential, SG/DU/PL = singular/dual/plural, 1/2/3 = 1st/2nd/3rd person, 6/10 = noun classes 6/10.

requirement militating against morphosyntactically non-distinct objects (cf. Richards 2010)—here, multiple class-A clitics. The rules in (5) capture the context-dependence of the B and C forms, as well as the grammatical relations they encode; for instance, clitics referencing subjects are either class-A or B, while clitics referencing IOs/causees are either class-A or C. In two-clitic constructions, only (5a) applies, yielding  $Cl_A$ - $Cl_B$ ; in three-clitic constructions, both rules apply, yielding  $Cl_A$ - $Cl_B$ - $Cl_C$ . The fact that there is never more than one A-clitic per verb (Phillips 1995) follows from the obligatoriness of dissimilation.

(5) *Clitic dissimilation rules in Yimas:*

- a. A clitic  $\alpha$  is realized with a **class B** form if it co-occurs with a clitic  $\beta$ , where the DP doubled by  $\alpha$  is a subject in the sentential syntax.
- b. A clitic  $\alpha$  is realized with a **class C** form if it co-occurs with clitics  $\beta$  and  $\gamma$ , where the DP doubled by  $\alpha$  is an indirect object or causee in the sentential syntax.
- c. If both rules can apply to a clitic sequence, apply rule b. before rule a.

**Evidence for clitic-specific dissimilation:** The rules in (5) are computed *internal to the domain of clitics*, and are independent of the sentence-syntax. This is supported by the behaviour of a set of non-doubled morphemes that do not tolerate class-A clitics (Phillips 1993, 1995; Gluckman 2014). When such morphemes are present, a clitic that is expected to surface with a class-A form is instead *realized with a B form* (6). Crucially, these morphemes do not obviously reference anything interacting with DPs at the sentence-level, but are sufficiently similar to the A-class clitics to trigger clitic dissimilation. These morphemes also sometimes idiosyncratically trigger other dissimilatory processes, further demonstrating that the effects discussed throughout are dissimilation: in (7) the class-A clitics are *impoverished* or *deleted altogether*.

- (6) a. **ama**-wat                      b. ant-**ka**-wantut  
       1SG.A-went                      POT-1SG.B-went  
       ‘I went.’                        ‘I would have gone.’ ( $Cl_A \rightarrow Cl_B$ )

- (7) a. ta-**pu**-wat                      b. ant- $\emptyset$ -**ka**-tur-um  
       NEG-3-went                      POT-3PL.A-1SG.B-killed-PL  
       ‘He didn’t go.’ ( $Cl_A \rightarrow impoverished$ )    ‘I almost killed them.’ ( $Cl_A \rightarrow \emptyset$ )

**Dependent case:** The clitic patterns in Yimas mirror the *dependent case* system of Marantz (1991), a.o., whereby case is assigned through competition between case-requiring elements. Like dependent case, the rules determining the surface form of a clitic are calculated among morphosyntactically similar objects in a particular domain (here, the span of clitics). As noted above, the clitic classes A, B, and C behave like absolutive, ergative, and dative case respectively. This parallel still holds under a dependent treatment of ERG and DAT case, which correctly predicts that these cases may be bled—realized as ABS/NOM, the default—when their realizational environments are not met, just as a clitic in Yimas remains class-A whenever the dissimilation rules do not apply. For instance, Podobryaev (2013) shows that incorporating the direct object into the verb in Alutor blocks dependent DAT case on the indirect object.

- (8) gəm-**nan** akka-**ŋ**    tə-nə-svitkuvətkən    utte-**?ut**    →    gəm-**nan** **akək**    tə-n-u-svitkuvətkən  
       1SG-ERG son-DAT 1SG.A-CS-cut    wood-ABS    1SG-ERG son-ABS 1SG.A-CS-wood-cut  
       ‘I am making the son cut wood.’                      ‘I am making the son cut wood.’

We thus see striking parallels between dependent case at the sentence-level cross-linguistically and morphology determined internal to the clitic domain in Yimas. This suggests that they arise from the same general mechanism—*dissimilation*, driven by a well-formedness condition cross-cutting different structural domains. This offers a reinterpretation of the logic behind dependent case: nominals are by default ABS/NOM, and surface with morphological (dependent) case only when required by well-formedness considerations mandating distinctness.

**Introduction.** Since Lebeaux (1991), there has been great interest in the hypothesis that syntactic structures are not built in a completely cyclic, bottom-up fashion, but rather, some elements—in particular, adjuncts—can be merged *late*, or countercyclically. Here, I argue that previously unnoticed facts about *adjunct stranding* in English show that adjuncts not only can but *must* be merged late—shedding new light on the relative timing of adjunction, movement, and phasal spellout.

**Background: adjunct stranding.** Certain adverbs, including *exactly* and *precisely*, can be associated with an interrogative *wh*-phrase. When so associated, an adverb of this type can either move with the *wh*-phrase to [Spec,CP] ((1a)) or be stranded by it ((1b)) (Urban 1999, a.o.).

- (1) a. Who exactly did they blame?    ~    b. Who did they blame exactly?

I analyze both (1a) and (1b) as involving adjunction of *exactly* to *who*, forming the following structure:  $[\text{DP}_{\text{WH}} [\text{DP}_{\text{WH}} \text{ who}] [\text{AdvP } \text{exactly}]]$ . *Wh*-movement can affect either the larger DP formed by adjunction ((1a)) or the lower segment alone ((1b)); in the latter case, the adverb is stranded.

**The puzzle.** The natural assumption about the position of *exactly* in (1b) is that it has been stranded in the base ( $\theta$ -) position of the direct object. It turns out, though, that WH-associated *exactly*-type adverbs apparently cannot be stranded in  $\theta$ -positions. Consider the following paradigm:

- (2) a. Muriel put WHAT exactly on the table with great care?!  
 b. Who put what exactly on the table with great care?  
 c. \*What did Muriel put exactly on the table with great care?  
 d. What did Muriel put on the table with great care exactly?

The echo question (2a) and the multiple question (2b) show that a WH-*exactly* constituent can be base-generated in a  $\theta$ -position. When this happens, though, the *wh*-associate cannot be moved, stranding *exactly* in situ ((2c)). (*Exactly* can be stranded at or near the right edge ((2d), (1b)); I show that in these cases it occupies a position in the C-layer high enough to survive  $\nu$ P-fronting and sluicing.) The question, then, is: Why is WH-adjoined *exactly* unstrandable in  $\theta$ -positions?

**Analysis.** I propose that WH-adjoined *exactly* is unstrandable in  $\theta$ -positions because syntactic derivations obey the generalization in (3), **Obligatory Late Merger of Adjuncts (OLMA)**:

- (3) For H a phase head and XP its associated spellout domain (= complement), adjunction within the HP phase occurs immediately before spellout of XP.

That is, the system prioritizes satisfying requirements imposed by features (selectional and EPP), and only when this is finished in a particular phase does it add “inessential” elements (adjuncts).

Consider the consequences of OLMA in (4), a stage in the derivation of the sentences in (2a-c):

- (4) [<sub>VP</sub> Muriel put- $\nu$  [<sub>VP</sub> what put on the table]]

Case 1: What does not move. Adjunction takes place within the  $\nu$ P phase: *exactly* is adjoined to *what*, and *with great care* to  $\nu$ P. By OLMA, immediately after adjunction, the complement of the phase head  $\nu$  (= VP, which contains *what exactly*) is spelled out. Thus, when a *wh*-phrase does not move, it can host an adjunct in its base position. This explains the well-formedness of (2a-b).

Case 2: What does move. In (4), we cannot adjoin *exactly* to *what* and then move *what* to [Spec, $\nu$ P], because adjunction is followed immediately by spellout. But we also cannot first move

*what* to [Spec,vP] and then adjoin *exactly* to its lower copy—assuming, plausibly, that adjunction must target highest copies. So when a *wh* does move, its lowest copy cannot host an adjunct ((2c)).

**Predictions.** Under OLMA, it should be possible to move a *wh*-phrase to the phase edge; adjoin *exactly* to it; and, in the next phase, move the host again, stranding *exactly*. That is, *exactly* should be strandelable at phase edges. This is true for CP, as *exactly* can be stranded in [Spec,CP]:

- (5) a. What do you believe **exactly** (that) everyone said (that) she devoured?  
b. What do you believe (that) everyone said **exactly** (that) she devoured?

It is also true for the clause-internal phase, whose edge can host *exactly* in informal registers:

- (6) a. <sup>1</sup>What did they **exactly** do at the bar? [<sup>1</sup> = informal]  
b. <sup>1</sup>What did he exactly mean by this? [from the Internet; many examples are attested]

Informal clause-medial stranded *exactly* precedes passive and progressive *be*, supporting Harwood's (2015) view that, when present, these auxiliaries are part of the clause-internal phase:

- (7) a. \*What had she been **exactly** sent? d. <sup>1</sup>What had she **exactly** been sent?  
b. \*What had she been **exactly** sending? e. <sup>1</sup>What had she **exactly** been sending?  
c. \*What had she been being **exactly** sent? f. <sup>1</sup>What had she **exactly** been being sent?

*Relative clauses.* The analysis also predicts that relative clauses (RCs) adjoined to *wh*-phrases should have the same distribution as WH-adjoined *exactly* ((2)). This prediction is borne out:

- (8) a. Muriel put WHAT that was slimy on the table with great care?!  
b. Who put what that was slimy on the table with great care?  
c. ?\*What did Muriel put · that was slimy · on the table with great care?

Under OLMA, a WH-adjoined RC should be strandable in [Spec,CP]. The result ((9b)), though not perfect, is much better than sentences that try to strand RCs in non-phase-edge positions ((9c)):

- (9) a. What that's really valuable did Mary say that Bill should keep locked up?  
b. ?What did Mary say · that's REALLY VALUABLE · that Bill should keep locked up?  
c. \*What did Mary say that · that's REALLY VALUABLE · Bill should keep locked up?

Finally, stranding a WH-adjoined RC at the left edge of the clause-internal phase (in Harwood's sense) should be more acceptable than stranding it in a non-phase-edge position. This is correct:

- (10) a. ?What had already · that was REALLY DIRTY · been washed for two hours by then?  
b. \*What had already been · that was REALLY DIRTY · washed for two hours by then?

**Conclusion.** An adjunct to an interrogative *wh*-phrase can be stranded by the movement of its host, unless it was adjoined to the host in the latter's base position. This seemingly odd generalization follows if adjunction within a phase HP occurs immediately before the spellout of H's complement. Adjunct stranding, then, furthers our understanding of the timing of adjunction and other operations, with implications for our understanding of the nature of adjunction structures.

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