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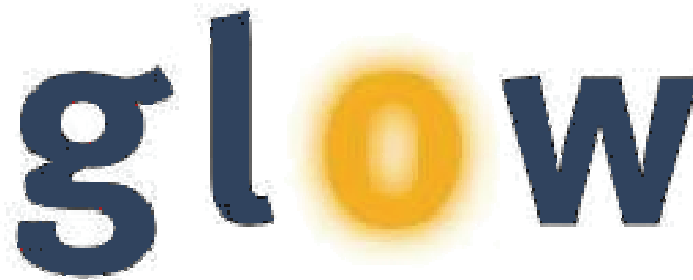
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Generative Linguistics in the Old World

GLOW Newsletter #64, Spring 2010
Edited by Marc Richards

Addresses:

GLOW NEWSLETTER

Marc Richards
Institut für Linguistik
University of Leipzig
Beethovenstr. 15
D-04107 Leipzig
Germany
richards@uni-leipzig.de

GLOW BUREAU

Utrecht Institute of Linguistics OTS
Utrecht University
PO Box 85253
3508 AG Utrecht
The Netherlands
Phone + 31 30 253 9163
Fax + 31 30 253 6406
glow@let.uu.nl

<http://glow.uit.no>

GLOW Newsletter & Conference Handbook

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INTRODUCTION

Welcome to the 64th GLOW Newsletter, your handy guide to the 33rd GLOW Conference, being held this year in Wrocław from April 13-16.

As is now the tradition, this Spring edition of the newsletter opens with practical information for attending the conference (p. 4), followed by the programmes for the Colloquium and workshops (p. 9 onwards). The remaining bulk of the newsletter is then comprised of the abstracts for this year's talks (colloquium, workshops, and alternates), arranged in strictly alphabetical order by first-named author. Following the format introduced last year, all workshop abstracts appear in their complete, unexpurgated, original accepted form, i.e. including any final pages for references; workshop abstracts have been shortened to a maximum of two pages by removing reference pages.

The Colloquium this year returns to a multi-session format for the opening day, with parallel sessions for phonology and syntax following the opening plenary talk by invited speaker, Henk van Riemsdijk. Preceding the Colloquium, on April 13, are the three conference workshops: *Slavic Syntax and Semantics* (invited speaker: Željko Bošković), *Positional Phenomena in Phonology and Phonetics* (invited speakers: Grzegorz Dogil and Taehong Cho), and *Recursivity of Information Structure*. The former two workshops also include *poster sessions*; lists of the posters being presented can be found in the relevant workshop programmes on pp. 9-13 (for space reasons, we were unable to include the abstracts for posters in this newsletter).

Whilst everything contained herein was correct at the time of going to press, you are advised to keep checking the conference website for updates (<http://www.ifa.uni.wroc.pl/~glow33/index.html>). Finally, if you have any suggestions for improvement to the content or format of the newsletter, then please do send them my way.

With a whopping 180 abstracts being submitted for this year's Colloquium (see p.7), interest and competition has certainly been at a high. It promises to be a good'un, so *venez nombreux* (or the Polish equivalent) and see you in Wrocław!

(And if you really can't make it, then see you in the Fall edition, out electronically in September...)

Marc Richards

CHANGES TO THE BOARD

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

Congress President	Bozena Rozwadowska	2009-2010
Chairperson	Sjef Barbiers	2009-2011
Secretary	Jeroen van Craenenbroeck	2009-2011
Treasurer	Maike Schoorlemmer	2009-2011
Newsletter Editor	Marc Richards	2008-2010
Journal Editor	Harry van der Hulst	
Website Manager	Gunnar Hrafn Hrafnbjargarson	2008-2010
Member A	Anna Cardinaletti	2008-2010
Member B	Lida Veselovska	2009-2011
Member C	Viola Schmitt	2009-2011
Member D	Ricardo Bermúdez-Otero	2008-2010
Advisory member 1	Henk van Riemsdijk	
Advisory member 2	Martin Everaert	
Co-opted member (Phonology)	Tobias Scheer	2009-2011

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 Board has made or received the following nominations:

- Martin Prinzhorn (Congress President)
- Marc Richards (re-election for Newsletter Editor)
- Gunnar Hrafn Hrafnbjargarson (re-election for Website Manager)
- Anna Cardinaletti (re-election for Member A)
- Maria Rosa Lloret (Member D)

WELCOME TO GLOW 33, WROCLAW!

The 33rd GLOW Colloquium is being hosted by the University of Wrocław, from 14th to 16th April 2010, with an additional sightseeing trip on Saturday 17th April. Three parallel workshops accompanying the Colloquium will be running on Tuesday 13th April: *Slavic Syntax and Semantics* (organized by Adam Mickiewicz University in Poznań), *Positional Phenomena in Phonology and Phonetics* (organised by the Zentrum für Allgemeine Sprachwissenschaft, Berlin), and *Recursivity of Information Structure* (organized by the University of Potsdam).

PRACTICAL INFORMATION

CONFERENCE SITE

The **Colloquium** (“main session”) on April 14 will be held at *Aula Leopoldina* in the main university building (on the first floor) at 1 Uniwersytecki Square. On April 15 and April 16, the Colloquium will be held at the Faculty of Law, 26 Uniwersytecka Street.

The **workshops** on April 13 will take place at the Institute of English, 22 Kuźnicza Street.

REGISTRATION

On the day of the workshops (Tuesday 13th April), the registration desk will be open from 8.30 in the lobby of the Institute of English, 22 Kuźnicza St. It will also be open on Tuesday 13th April in the evening, from 18.00 to 21.00. Throughout the Colloquium the conference desk will be located in front of the rooms where the Colloquium is being held.

Please remember that GLOW membership is necessary for registration. Please also note that after April 1st, late registration fees apply for the Colloquium (“main session”).

REGISTRATION FEES

EARLY REGISTRATION (BEFORE APRIL 1 st)			LATE REGISTRATION (AFTER APRIL 1 st)		
	Faculty	Students		Faculty	Students
Workshops only	200 PLN (approx. 45€)	100 PLN (approx. 25€)	Workshops only	200 PLN (approx. 45€)	100 PLN (approx. 25€)
Main session (+ workshops)	350 PLN (approx 80€)	200 PLN (approx. 45€)	Main session (+ workshops)	450 PLN (approx. 100€)	250 PLN (approx. 60€)

TRAVEL INFORMATION

[Wrocław airport](#) is located 10 km west of the city centre and is served by [LOT](#) (flights from Warsaw, Frankfurt, and Munich), [Lufthansa](#) (Frankfurt, Dusseldorf, and Munich), [Ryanair](#) (Alicante, Barcelona Girona, Bologna, Bristol, Brussels Charleroi, Dublin, Düsseldorf Weeze, East Midlands, Frankfurt Hahn, Glasgow Prestwick, Liverpool, London Stansted, Oslo Rygge, Rome Ciampino, and Shannon), and [Wizzair](#) (Cork, Doncaster Sheffield, Dortmund, Dublin, Eindhoven, Forli, London Luton, Milan Bergamo, Oslo Torp, and Paris Beauvais).

There is a bus (no. 406) that goes every 30 minutes to the main central railway station. The last bus to the station departs at 22:29; the schedule is available at http://www.wroclaw.pl/rozklady/przystanki/406_17_2.html. A ticket costs 2.40 PLN, but if you have luggage with you, you will need an extra ticket for 1.20 PLN. You can also take a taxi, which will cost around 50-60 PLN.

The main **railway station** in Wrocław is called **Wrocław Główny**. You can check train schedules and plan your trip using this website: <http://rozklad-pkp.pl/?q=en/node/143>

The **bus station** is next to the railway station. You can find schedules of international buses going to Wrocław at this website <http://www.podrozowanie.pl/reservation.html>

Getting to the conference venue:

Take tram no. 8 or 11 from the main railway station and get off at the *Hala Targowa*, which is the third stop. For detailed instructions on how to get to the conference venue from other locations by public transportation, consult the following website: <http://wroclaw.jakdojade.pl/?locale=en>.

ACCOMMODATION

Partner hotels:

GLOW participants can stay at the following partner hotels and ask for a **special GLOW room rate**. The hotels are all located near the conference venue; the quoted room rates include breakfast.

- 1) *** [Hotel Tumski](#) (10 Wyspa Słodowa Street)
<http://www.hotel-tumski.com.pl/hotel/20576.xml?null>
Room rates: Single room 240 PLN/€ 58; Double room 320 PLN/€ 78

Reservations for this hotel must be received by **15th March**, after which they will be accepted on a space-available basis only. To make a reservation, fill in the relevant form at <http://www.ifa.uni.wroc.pl/~glow33/venue.html> and e-mail it to rezerwacje@hotel-tumski.com.pl or fax it to +48 71 322 61 13.

- 2) ***[Hotel Lothus](#) (22/23 Wita Stwosza Street)
<http://www.lothus.pl/>
Room rates: Single room 210 PLN/€ 51; Double room 250 PLN/€ 61

Reservations for this hotel must be received by **1st April**, after which they will be accepted on a space-available basis only. To make a reservation, fill in the relevant form at <http://www.ifa.uni.wroc.pl/~glow33/venue.html> and e-mail it to rezerwacja@lothus.pl or fax it to (0048) 71 341 97 38.

3) ****Hotel Campanile (7 Jagiełły Street)**

<http://www.campanile-wroclaw.pl/en/rooms.aspx>

Room rates: Single room 210 PLN/€ 51; Double room 240 PLN/€ 59

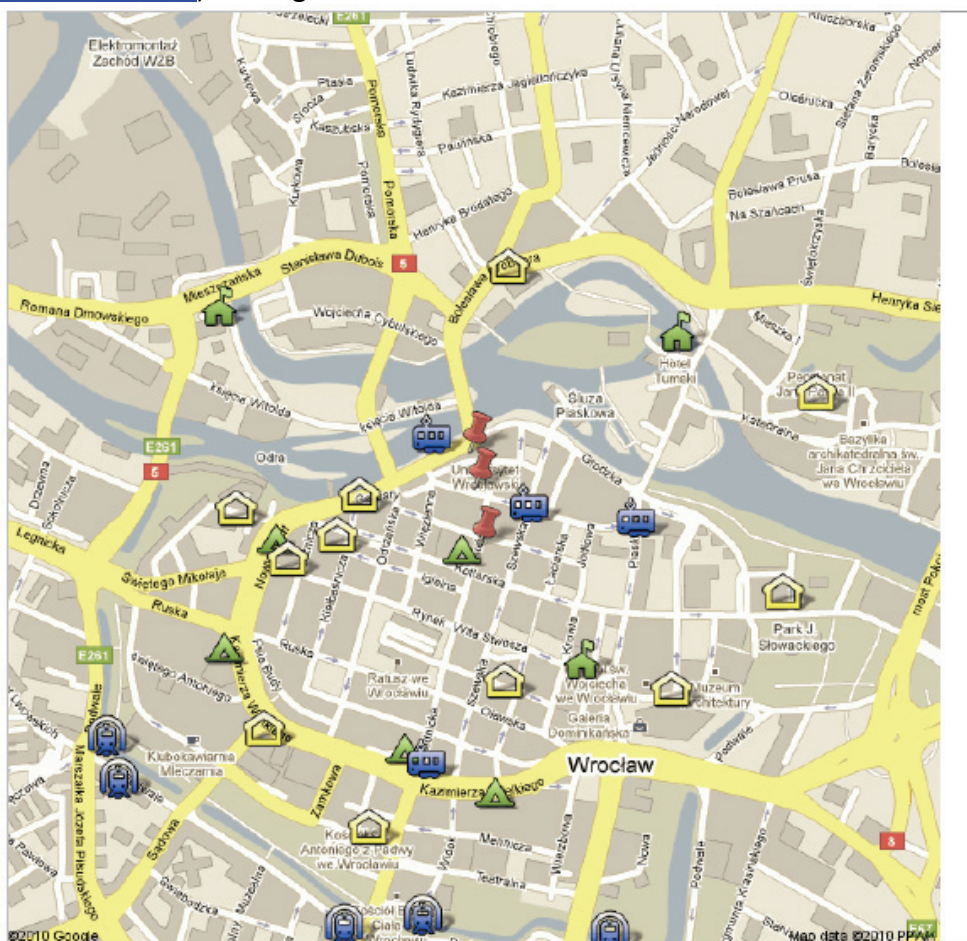
Reservations for this hotel must be received by **15th March**, after which they will be accepted on a space-available basis only. To make a reservation, send an e-mail to wroclaw@campanile.com.pl and mention that you are a *GLOW* participant.

A list of other **hotels and hostels** is given on the conference website:

<http://www.ifa.uni.wroc.pl/~glow33/venue.html>.

MAP

The following map gives you a rough idea of the relative locations of the aforementioned sites: the conference venue, numerous hotels, local tram stops, railway station, etc. Visit the conference website (<http://www.ifa.uni.wroc.pl/~glow33/venue.html>) for larger and interactive versions.



SELECTION PROCEDURE

180 abstracts were received for the main session. The reviewing process was conducted via EasyChair. Each anonymous abstract was assigned to five reviewers, who were asked to globally grade each abstract from 0 to 6, and also to grade the following aspects of abstracts from 0 to 5: (i) originality of the claim, (ii) bibliography (well informed of recent advances), (iii) structure of the argument (is it clear enough?), (iv) does the paper build on new data?, (v) articulation between empirical and formal aspects. In addition, the reviewers were encouraged to provide comments (including comments for the Programme Committee only). The average scores were then computed, with the reviews weighted by reviewer's confidence (on the scale from 0 to 4).

The top 65 abstracts were re-read by the members of the selection committee (Sjef Barbiers, Tobias Scheer, Bozena Rozwadowska, Joanna Blaszczak, Dorota Klimek-Jankowska, Krzysztof Migdalski, Patrycja Jablonska, Bartosz Bachurski (secretary)) and discussed during the meeting. The committee carefully read the reviewers' comments on those papers and selected the best 26 submissions (including 6 phonology abstracts) plus four alternates (three in the area of syntax/semantics/morphology and one in phonology). The final programme was then drawn up.

The breakdown of submitted and accepted abstracts by country can be found in the table on the following page.

REIMBURSEMENT

Speakers at the Colloquium (i.e. "main session"), including alternates *if they present their talk*, will be partially reimbursed (the exact amount of the reimbursement will be known later).

Only one reimbursement will be made per talk, regardless of the number of co-authors presenting.

Colloquium speakers are also exempted from paying the conference registration fee. Workshop presenters will not be reimbursed and must pay the conference fee if they attend the Colloquium.

STATISTICS BY COUNTRY

COUNTRY	Authors	Submitted	Accepted	Acceptance Rate (%)
Austria	2	1.33	0	
Belgium	3	4.00	0.50	13%
Brazil	9	8.00	1.00	13%
Canada	16	9.83	2.00	20%
Cyprus	2	1.00	0	
Czech Republic	1	1.00	0	
Denmark	1	1.00	1.00	100%
Finland	1	1.00	0	
France	5	3.50	0	
France, Metropolitan	1	1.00	0	
Germany	22	16.42	2.00	12%
Greece	6	4.25	0	
Hungary	4	3.00	0	
India	1	1.00	0	
Iran, Islamic Republic of	2	1.00	0	
Israel	3	2.00	0	
Italy	7	5.50	1.00	18%
Japan	7	3.83	0	
Korea, Republic of	7	6.00	1.00	17%
Netherlands	12	11.67	3.00	26%
Norway	9	8.50	0	
Poland	5	5.00	1.00	20%
Portugal	2	1.00	0	
Romania	2	1.50	0	
Russian Federation	5	4.00	0	
Singapore	1	1.00	0	
Slovenia	2	2.00	0	
Spain	8	6.00	0	
Sweden	3	3.00	0	
Switzerland	2	2.00	1.00	50%
Taiwan	2	2.00	0	
Turkey	2	2.00	1.00	50%
United Kingdom	10	8.00	2.00	25%
United States	59	47.67	9.50	20%

GLOW 33 COLLOQUIUM PROGRAMME: APRIL 14-16

<u>Wednesday 14 April</u>			
Venue: <i>Aula Leopoldina</i> , Main University Building (first floor), 1 Uniwersytecki Square			
8h30	Registration open		
9h00	Opening		
9h15	<i>Invited Speaker: Henk van Riemsdijk</i> Tilburg University TBA		
10h15	Coffee Break		
	Syntax		Phonology
10h45	Gary Thoms Strathclyde University <i>Syntactic reconstruction and scope economy</i>	10h45	Suyeon Yun Seoul National University <i>A Typology of Compensatory Lengthening: A Phonetically-based Optimality Theoretic Approach</i>
11h45	John Bailyn Stony Brook University <i>Scrambling, Move-F and Derivational Binding</i>	11h45	Heather Goad McGill University <i>Structural vs. Perceptual Constraints on sC Clusters: Evidence for a Coda Analysis of s</i>
12h45	Lunch break		
14h00	Clemens Mayr Harvard University <i>Updating alternatives: focus on bound pronouns</i>	14h00	Geoff Schwartz Adam Mickiewicz University <i>Onset Prominence and Tashlhiyt Berber syllabification</i>
15h00	E. Matthew Husband Brown University <i>Compositional States</i>	15h00	Markus Alexander Pöchtrager Boğaziçi University <i>The Structure of A</i>
16h00	Coffee Break		
16h30	Alexis Wellwood, Valentine Hacquard, and Roumyana Pancheva University of Maryland/ University of Southern California <i>The measure and comparison of events</i>	16h30	Daniel Currie Hall Meertens Instituut Amsterdam <i>Notes on some putative unnatural classes</i>
17h30	Eva Dobler, Mina Sugimura, and Lisa Travis McGill University <i>Domain mismatches: PF vs. LF and XP vs. X and AGREE</i>	17h30	Nicola Lampitelli University of Paris VII and University of Pennsylvania <i>Phonology meets Syntax in the Bosnian declensional system</i>
18h30	End of the day		
19h00	Conference dinner		

Thursday 15 April Venue: Faculty of Law, 26 Uniwersytecka Street	
9h00	Katy McKinney-Bock and Jean-Roger Vergnaud University of Southern California <i>Grafts and beyond</i>
10h00	Martin Salzmann University of Konstanz <i>ATB as asymmetric extraction + derivational ellipsis</i>
11h00	Coffee Break
11h30	Bradley Larson University of Maryland <i>Bare Phrase Coordination</i>
12h30	Stefan Keine University of Leipzig <i>Switch-Reference as an Interface Conspiracy</i>
13h30	Lunch break
15h00	Kirill Shklovsky and Yasutada Sudo MIT <i>No Case Licensing: Evidence from Uyghur</i>
16h00	Jeffrey K. Parrott University of Copenhagen <i>Case variation in coordination across Scandinavian varieties</i>
17h00	Coffee Break
17h30	Kirill Shklovsky MIT <i>Person-Case Effects in Tsel'tal</i>
18h30	Business Meeting

Friday 16 April Venue: Faculty of Law, 26 Uniwersytecka Street	
9h00	Hedde Zeijlstra University of Amsterdam <i>One way to Agree</i>
10h00	Liliane Haegeman and Terje Lohndal University of Ghent/University of Maryland <i>Simply Agree, not Multiple Agree</i>
11h00	Coffee Break
11h30	Anne Breitbarth University of Ghent <i>The independence of negative concord and Jespersen's Cycle</i>
12h30	Genoveva Puskás University of Geneva <i>On the Semantic and Syntactic Licensing of Double Negation</i>
13h30	Lunch break
15h00	Erik Schoorlemmer and Tanja Temmerman Leiden University <i>On the interaction between verb movement and ellipsis in the PF component</i>
16h00	Shiti Malhotra University of Maryland <i>Island Effects and Multiple Wh-movement</i>
17h00	Coffee Break
17h30	Jairo Nunes University of São Paulo <i>Edge Features on Moving Elements: Evidence from Sideward Movement</i>
18h30	End of the day

GLOW 33 WORKSHOP PROGRAMMES: TUESDAY APRIL 13

Workshop 1: Slavic Syntax and Semantics (Organizer: Jacek Witkoś)

8.30-9.00 Registration open / Opening

9.00-10.00 **Invited speaker:** Željko Bošković (University of Connecticut):
Phases beyond clauses.

10.00-11.00 Irina Agafonova (Michigan State University):
On syntax-semantics of gapping constructions in Russian.

11.00-11.30 Coffee break

11.30-12.30 Natalia Fitzgibbons (University of Connecticut):
Russian -nibud' series and quantifier raising.

12.30-13.30 Hakyung Jung & Heejeong Ko (Seoul National University):
Russian Existentials, Edge Effects and Cyclic Linearization.

13.30-15.00 Lunch break

15.00-16.00 Dorothee Fehrmann (University of Leipzig), Uwe Junghanns (University of Goettingen) & Denisa Lenertova (University of Leipzig):
Reflexive marking and oblique agents.

16.00-17.00 Roumyana Pancheva & Barbara Tomaszewicz (University of Southern California):
Experimental evidence for the syntax of phrasal comparatives in Polish.

17.00-17.30 Coffee break

17:30-18:30 Andrea Tarantola & Antonio Civardi (University of Florence):
'Quirky tense marking' in Slavic and Creole languages.

18.30-19.30 Poster session:

John Frederick Bailyn (Stony Brook University): *On the VP internal structure debate in Russian.*

Božena Cetnarowska (University of Silesia), Agnieszka Pysz (Høgskulen i Volda) & Helen Trugman (Holon Institute of Technology): *Where movement fails: problems with movement-based accounts of adjective placement.*

Pavel Grashchenkov (University of Moscow): *Adjectival derivation in Russian: restricted choice of unlimited combinations.*

Natalia Ivlieva & Alexander Podobryaev (Massachusetts Institute of Technology): *Does distributed deletion apply across the board?*

Olga Kagan (Hebrew University of Jerusalem and Ben Gurion University of the Negev): *A scalar approach to Slavic prefixes.*

Marijana Marelj & Ora Matushansky (Utrecht University): *Against overt predicators in Slavic.*

GLOW 33 WORKSHOP PROGRAMMES: TUESDAY APRIL 13

Workshop 2: Positional Phenomena in Phonology and Phonetics

(Organizers: Marzena Żygis, Stefanie Jannedy, Susanne Fuchs)

8.30-9.00 **Registration open / Opening**

9.00-10.00 **Invited speaker:** Grzegorz Dogil (Institute for Natural Language Processing, Universität Stuttgart):
Language learning and brain activity: Real time fMRI study of processing of prosody.

10.00-11.00 Sahyang Kim (Hongik University, Seoul), Mirjam Broersma (Radboud University Nijmegen, and Max Planck Institute for Psycholinguistics, Nijmegen) & Taehong Cho (Hanyang University, Seoul):
Native and non-native prosodic cues in segmentation and learning.

11.00-11.30 **Coffee break**

11.30-12.30 **Invited speaker:** Taehong Cho (Hanyang University, Seoul):
Prosodic strengthening in speech production and perception.

12.30-13.30 Cédric Gendrot & Kim Gerdes (Laboratoire de Phonétique et Phonologie (UMR7018, CNRS/Paris3-Sorbonne-Nouvelle)):
Prosodic boundaries and spectral realization of French vowels.

13.30-15.00 **Lunch break**

15.00-16.00 **Poster session:**

Pia Bergmann (Universität Freiburg): *Edge-marking at the p-word boundary – Effects of word frequency and accentuation.*

Daniel Duran, Hinrich Schütze & Bernd Möbius (Universität Stuttgart): *Towards a computational model of unsupervised speech segmentation for correspondence learning.*

Laurianne Georgeton, Angélique Amelot & Cecile Fougeron (Laboratoire de Phonétique et Phonologie (UMR7018, CNRS/Paris3-Sorbonne-Nouvelle)): *Labial articulation of rounded and unrounded vowels at the beginning of different prosodic constituents in French.*

Dahee Kim (The Ohio State University): *Prosodically conditioned variation in the three-way contrast of Korean stops.*

Catharine Oertel & Andreas Windmann (Universität Bielefeld): *The influence of syntactic boundaries on place assimilation in German.*

Michael Ramsammy (University of Manchester): *Positional asymmetries in Spanish nasal codas: A perceptuo-articulatory account.*

Rajiv Rao (University of Wisconsin-Madison): *The effect of phrase position on stress in Spanish compound words.*

- Arkadiusz Rojczyk (University of Silesia, Katowice): *Vowel quality and duration in stressed and unstressed positions in Polish.*
- Raquel S. Santos (Universidade de São Paulo): *Initial prosodic patterns: neither children directed speech nor default value in UG.*
- Franziska Scholz, Yiya Chen, Lisa Lai-Shen Cheng & Vincent J. van Heuven (Leiden University, Centre for Linguistics): *Phrasing variation of verb-object constructions in Wenzhou Chinese.*
- Jagoda Sieczkowska, Andreas Madsack & Grzegorz Dogil (Universität Stuttgart): *Voicing profile of sonorants in consonant clusters: A case of Polish, German and American English.*
- Patrycja Strycharczuk (University of Manchester): *Phonetics, phonology and Poznan /d/-voicing.*
-
- 16.00-17.00 Hijo Kang (Stony Brook University, New York):
Position and height asymmetries in hiatus resolution: An acoustic analysis of Korean VV sequences.
- 17.00-17.30 Coffee break**
- 17.30-18.30 Tara McAllister (Montclair State University, Bloomfield, NJ):
Child-specific patterns of positional neutralization: Articulatory versus perceptual influences.
- 18:30-19:30 Christine Shea (University of Calgary):
Strong positions maintain their strength: Universal and lexical effects in the acquisition of L1 Spanish allophones.

GLOW 33 WORKSHOP PROGRAMMES: TUESDAY APRIL 13

Workshop 3: Recursivity of Information Structure (Organizers: Gisbert Fanselow, Caroline Féry, Shinichiro Ishihara)

8.30-9.00 Registration open / Opening

9.00-10.00 Valentina Bianchi & Mara Frascarelli (Università di Siena & Università Roma Tre):

Topics, phases, and contexts of interpretation.

10.00-11.00 Rosmin Mathew (CASTL):

Phasal Recursion of FocP: Evidence from Malayalam.

11.00-11.30 Coffee break

11.30-12.30 Ágnes Bende-Farkas (Hungarian Academy of Sciences):

Hungarian Focus in a Scope-Marking Configuration.

12.30-13.30 Daniel Hole (Universität Stuttgart):

'Only' decomposed and syntacticized.

13.30-15.00 Lunch break

15.00-16.00 Hideki Kishimoto (Kobe University):

Topicalization and Hierarchical Information Structure in Japanese.

16.00-17.00 Satoshi Tomioka (University of Delaware):

Embedded Topics, Predication, and Judgment Theory.

17.00-17.30 Coffee break

17:30-18:30 Susanne Winkler (University of Tübingen):

Island Sensitivity of Contrastive Focus in Sluicing.

18.30-19.30 General Discussion

ALTERNATES

Colloquium (April 14-16)	
phonology	Sabrina Bendjaballah and Philippe Ségéral CNRS and University of Paris VII <i>Bidimensional morphemes in Mehri</i>
syntax/ semantics	Marina Pantcheva University of Tromsø <i>Decomposing Path</i>
	Tanja Temmerman Leiden University <i>The PF-theory of islands and the WH/slicing correlation: New evidence from Dutch and English fragment answers</i>
	Michael Gagnon University of Maryland <i>Antecedent Contained Deletions Revisited</i>

Workshop 1: Slavic Syntax and Semantics (April 13)
Federico Damonte & Jacopo Garzonio University of Cambridge & University of Padova <i>Conditional inversion in Russian</i>

Workshop 2: Positional Phenomena in Phonology and Phonetics (April 13)
Raquel S. Santos & Eneida G. Leal Universidade de São Paulo <i>Syllable lengthening and prosodic boundaries in Brazilian Portuguese</i>

Workshop 3: Recursivity of Information Structure (April 13)
Masahiro Yamada*, Satoshi Tomioka* & Sachie Kotani** *University of Delaware & **Tezukayama University <i>On the recursivity of focus intonation in Japanese: Wh-foci in embedded contexts</i>

On syntax-semantics of gapping constructions in Russian

Irina Agafonova

The paper presents the observation that modals in gapping with conjunction have both wide and narrow scope readings in Russian. We argue that adopting a Hamblin semantics (Kratzer and Shimoyama, 2002) for conjunction will account for the data without complicating the syntax of gapping constructions, which we assume (after Johnson, 2004, 2009) involves coordination of small phrases, i.e. vPs.

Core data. The sentence in (1) is a gapping sentence where the modal appears in the first conjunct but it is omitted in the second conjunct. Although the modal is not present in the second conjunct, it is interpreted as if it were there. The sentence has three possible readings. On first reading (1a), the modal takes wide scope over the entire coordinate structure. We find the wide scope reading of the modal in English (2a). The other two readings correspond to narrow scope reading of the modal with respect to conjunction. (1b) denotes that any choice is a permissible option. (1c) has conjunction scoping over the epistemic modal. There is no narrow scope reading of the modal in English (2b). Narrow scope reading of the modals is possible within the scope of negation in Russian (3).

Approaches to gapping. There are two principle ways to analyze gapping constructions. Gapping is derived from VP-ellipsis (Sag, 1980; Pesetsky, 1982; Jayaseelan, 1990; Lasnik, 1999; Schwarz, 2000; Takahashi, 2004). On this approach, bigger phrases, i.e. TPs, are conjoined and the material is deleted in the second conjunct (4). On the non-deletion approach, smaller phrases, i.e. vPs, are conjoined (Siegel, 1987; Coppock, 2001; Lin, 2002) and the shared material moves across-the-board (Johnson, 2004, 2009). We show that licensing environments (5) and the subject binding fact (6) prevent us from adopting the deletion approach for gapping in Russian. We extend the non-deletion approach to Russian gapping constructions (7) and argue for a unified analysis of gapping cross-linguistically.

Puzzle. Given our motivation for the gapping structure in (7), the interpretation facts in (1) are puzzling. Another puzzling fact is why narrow scope reading of modals is available in Russian but not in English.

Proposal. We argue that adopting a Hamblin semantics for conjunction accounts for the data without abandoning the non-deletion approach to gapping. On this approach, conjunction forms alternative sets (see Munn 1993 for conceptual and empirical arguments for conjunction as set forming operator; for independent evidence for alternative semantics for disjunction see Alonso-Ovalle 2005, Hulse 2008). Conjunction takes two singleton sets and gives an alternative set containing two members, as schematized in (8). To derive wide scope modal reading, we first close the set by a universal operator which turns the alternative set into a singleton set. Then, we apply the modal (9). To derive narrow scope modal reading, the modal combines via pointwise functional application giving the alternative set. The alternative set is closed by a universal operator which turns the alternative set into a singleton set (10). To account for the difference between English and Russian, we refer to selectivity as defined in Kratzer and Shimoyama 2002 for indeterminate phrases. We propose that conjunctions can be selective. They carry uninterpretable features corresponding to the interpretable features on operators. In English, and has an uninterpretable feature $[\forall]$ which has to be checked against its interpretable counterpart carried by the universal quantifier both. In Russian, the conjunction has also an uninterpretable feature $[\forall]$, but it has to be checked against an 'inflectional category' such as (generic) aspect. The interaction between the features and corresponding operators is

subject to syntactic constraints. The latter explains why there is wide scope conjunction in Russian (12), but not in English (11).

Conclusion. The proposed analysis supports the same syntactic representation for gapping cross-linguistically, naturally derives the interpretation facts and provides a unified semantics for conjunction and disjunction which is conceptually preferred.

- (1) Odni **mogut est'** ikru, a drugie **est'** boby.
 some can eat caviar and others eat beans
 'Some can eat caviar and others eat beans.'
- a. Odni **mogut est'** ikru poka drugie **edjat** boby.
 some can eat caviar while others eat beans
 'Some can eat caviar while others eat beans.'
- b. Vse gosti **mogut est'** bljudo na izbor. (context)
 all guests can eat dish of choice
 'All guests can eat a dish of their choice.'
 Odni **mogut est'** ikru, a drugie **mogut est'** boby.
 some can eat caviar and others can eat beans
 'It is permitted for some to eat caviar and for others to eat beans.'
- c. U kogo na čto net allergii? (context)
 by who to what no allergy
 'Who has no allergy to what?'
 Odni **mogut est'** ikru, a drugie **mogut est'** boby.
 Some can eat caviar and others can eat beans
 'Some can eat caviar and others can eat beans.'
- (2) Ward **can't** eat caviar and Sue **eat** beans. (Siegel, 1987; Oehrle, 1987)
 a. Ward can't eat caviar while Sue eats beans.
 b. Impossible reading: Ward can't eat caviar and Sue can't eat beans.
- (3) Odni **ne mogut est'** ikru, a drugie **est'** boby.
 some not can eat caviar and others eat beans
 Possible reading: 'Some cannot eat caviar and others cannot eat beans.'
- (4) [_{TP} Some **ate** natto] [_{ConjP} and [_{TP} others **ate** rice]]. (Johnson, 2009)
- (5) *Ženščiny zakazali vino, a [oficiant **utverždaet**, čto mužčiny kon'jak].
 women ordered wine and waiter claims that men cognac
 '*Women ordered wine and the waiter claims that men – cognac.'
- (6) Ne každyj **mal'ciki**_i budet igart v kukly, a **ego**_i sestra v zvezdnie vojny.
 Not every boy will play in dolls and his sister in star wars
 'Not every boy_i will play dolls and his sister_i – star wars.'
- (7) [_{TP} Some_i can [_{VP} t_i eat caviar] [_{ConjP} and [_{VP} others eat beans]]]
- (8) [[caviar and beans]] = [[DP₁]] ∪ [[DP₂]] = {c, b}
- (9) can(∇ {λw'.eat_{w'}(some, caviar), λw''.eat_{w''}(others, rice)})
- (10) ∇ ({can({λw'.eat_{w'}(some, caviar)}), can({λw''.eat_{w''}(others, rice)})})
- (11) English: Ward can **both** eat caviar and his guest eat dried beans.
 a. and stays within the domain of **both** ([∇_{both}])
 b. *and scopes over the modal (feature clash with [∇_{aspect}])
- (12) Russian: Some can eat caviar and others eat beans.
 a. the conjunction stays within the domain of aspectual operator ([∇_{aspect}])
 b. the conjunction scopes over the modal but is caught by generic aspect ([∇_{aspect}])

Scrambling, Move-F and Derivational Binding

John Frederick Bailyn

Stony Brook University

Movement analyses of syntactic processes that do not have phonological affects abound, the class of so-called “covert” movements. Examples include QR (May 1977, Fox 1999 a.o.), Covert V Mvt (Epstein 1998), Expletive Replacement (Chomsky 1995), Covert WH-Mvt (Huang 1982) and Anaphor Mvt (Cole & Sung 1994). Originally, covert movement was conceived of as being ‘post-syntactic’ (Huang 1982, Chomsky 1995), occurring on the way to Logical Form (LF), *after* the expression was sent off to the phonological component (PF). LF-movement allowed a single surface string with two interpretations, such as (1), to be associated with two distinct LF representations (2), thus accounting for its scope ambiguity.

(1) Some boy loves every girl. (a) $[\exists x \forall y]$ or (b) $[\forall y \exists x]$

(2) 2 LFs: (a) [Some boy [every girl [t loves t]]] or (b) [Every girl [some boy [t loves t]]]

More recent approaches argue that apparently covert movements are in fact overt instances of feature movement, or Move F. In many cases it is difficult, if not impossible, to tease apart the two approaches (LF movement vs. overt Move F) (though see Aoun and Nunes 2007). In this paper, I argue that a Paradox in Binding Theory phenomena constitutes an argument in favor of Move F over covert LF movement. The conflicting conclusions are as follows:

I. Principle A of the Binding Theory is derivational (Belletti & Rizzi 1988, Epstein et al 1998, Saito 2003). Under minimalist assumptions, Binding cannot apply at surface structure. When Chomsky (1995) attempted to restrict the application of all binding effects to the level of LF, it was hoped that the Copy Theory of movement (or its predecessor -- Reconstruction), could account for all cases of non-surface binding, such as (3), at LF (Fox 1999).

(3) [Which pictures of **himself**] did **John** say ___ that **Bill** saw ___?

However, problems with the LF binding theory abound (Epstein et al 1998, Saito 2003, Hicks 2009). Overt A’-scrambling, for example, can feed new binding relations (Saito 2003, Antonenko 2009), despite the well-known fact that Scrambling obligatorily reconstructs (Saito 1992). Thus although the LF position of the Japanese scrambled anaphor *zibunzisin* in (4b) must be its unscrambled thematic position, shown in (4a), binding by the higher subject is still possible in (4b), as opposed to the necessarily local reading of the unscrambled (4a).

(4) a. Hanako-ga_j [CP **Ziroo**-ga_k **zibunzisin**-o_{*i/k} hihansita to] omotteiru (koto)
Hanako_{NOM} Ziroo_{NOM} self_{ACC} criticized that think fact
‘Hanako_j thinks that Ziroo_k criticized self_{*i/k}’ (Japanese) (Unscrambled: Local only)

b. **Hanako**-ga_j [CP **zibunzisin**-o_{i/k} [CP t’ **Ziroo**-ga_k t hihansita to] omotteiru (koto)
Hanako_{NOM} self_{ACC} Ziroo_{NOM} criticized that think fact
‘Hanako_j thinks that self_{i/k} Ziroo_k criticized t’ (Scrambled: ambiguous) (exs from Saito 2003)

Binding relations must therefore be established *before* the level of LF, and as such are derivational. In arguing for derivational binding to account for facts such as (4) and others from scrambling languages, I argue against reductionist approaches to binding, also derivational, such as Hornstein 2001, Kayne 2002, Zwart 2002, that do not maintain traditional Binding Theory but rather derive apparent binding effects (c-command, locality) from movement itself. Following Bailyn 2009 and Hicks 2009, I argue that such approaches cannot account for core binding phenomena and that anaphors and pronouns are legitimate lexical items subject to Principles A and B of the Binding Theory. I also address the potential counter-arguments to derivational binding in Baltin (2003) and Fox and Nissenbaum 2004, showing how a derivational approach sensitive to phases can account for the data they present as problematic. We can and must, therefore, maintain a derivational Binding Theory – Part One of the Paradox at hand.

II. Principle A is Representational. Cole & Sung 1994 argue that the Subject Condition on anaphor binding in languages with monomorphemic anaphors, (and its correlate, the anti-subject orientation of pronouns, Hestvik 1992) is derived by covert anaphor movement to T. This proposal accounts for the requirement that such anaphors be bound only by structural subjects, and crucially not by objects, as exemplified in (5). (Compare this with the English translation of (5) where the complex anaphor doesn't raise, hence no Subject Condition).

- (5) **Ivan** sprosil Borisa o **sebe** (*sebe* = *Ivan* only) (Russian)
 Ivan asked Boris about self
 'Ivan asked Boris about himself.'

After anaphor movement in (5), only the subject is in a legitimate binding relation with the anaphor -- the object is excluded because it no longer c-commands the anaphor. Binding relations must therefore NOT be established before the level of LF, and as such are representational – Part Two of the Paradox at hand.

In this paper, I show how the Paradox reached here can be resolved if we assume (a) that covert anaphor movement is in fact an instance of (overt) Move F, required of monomorphemic anaphors (and pronouns), (b) that Move F is capable of feeding new binding relations (a point argued on independent grounds in Branigan 2000) and (c) that binding is derivational in the manner given in (6) and (7).

(6) *Derivational Spell Out* (Epstein et al 1998, Saito 2003)

An element becomes interpretable when all its uninterpretable features have been checked.

(7) *The Monomorphemic Anaphor Condition:*

- a. Monomorphemic anaphors have an (independent) requirement to have their [A] feature valued **in T** (=LF movement of anaphors) (Cole & Sung 1994, Saito 2003)
- b. LF movement of anaphors = *Overt movement of [A] to satisfy a strong Agree relation with T* (=Move F) (Rudnitskaya 2000)

In particular, (7) claims that anaphors can be bound at any stage of the derivation after all their featural requirements are satisfied, crucially including after the requirement that the anaphor raise to T (the spirit of the LF movement account). Thus overt Move F is required before derivational binding can apply. Once it does, no reconstruction (or interpretation of a lower copy) can disrupt that binding relation. Only (overt) Move F can resolve the Binding Paradox described here.

This account has an interesting consequence for Principle B. Because Slavic inversion constructions (Bailyn 2004) do not induce surface binding (8), despite the A-properties of the fronted object (such as the lack of WCO in (9)) – the 'freedom' from co-reference required for pronouns from Principle B must be established before Inversion.

- (8) **Ivana** ljubit [**ego** žena] (OVS Inversion: no Principle B violation)
 Ivan_{ACC} loves his wife_{NOM}
 'Ivan is loved by his wife.'

- (9) **Kogo** ljubjat [**ego** druz'ja] (OVS Inversion: no WCO)
 Who_{ACC} loves his friends_{NOM}
 'Who is loved by his friends?'

This implies, contra Sabel 2006, that Principle B need not apply at every interpretive domain or phase, but rather that it apply at one of them (here the lower phase before movement), which constitutes another argument for derivational binding.

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HUNGARIAN FOCUS IN A SCOPE-MARKING CONFIGURATION

Ágnes Bende-Farkas

RIL–HAS Budapest (E-mail: agnesbf@nytud.hu)

Abstract

This contribution presents evidence from syntactic Focus-marking in Hungarian that the Background–Focus division can be recursive, at least in languages with a dedicated Focus position and syntactic movement to that position. Three types of data will be presented: 1. So-called multiple Foci (Krifka) in one (simple) sentence, where the syntactically ‘deeper’ Background–Focus division is embedded in the Background of the syntactically superordinate Focus. 2. Foci in embedded clauses — such sentences are not always equivalent to the sentences we get with Focus movement to the matrix. 3. A variant of 2, where the matrix contains a propositional kataphor in Focus position and the Focus position of the subordinate clause is also filled. Such sentences are like the declarative counterparts of “scope marking” or partial *wh*-movement structures, and are not in general equivalent to their variants with long Focus movement. The paper will also offer a formally explicit semantic analysis of such “partial Focus movement” structures, inspired by Dayal (1996) and Sternefeld (1999, 2001).

The fundamental question for this contribution is what it means for information structure to be “recursive”, or, conversely, to be non-recursive. In the special case of Focus marking and the Background–Focus division non-recursiveity could in principle be manifested in two ways: (A) Focus-marking within the Background is impossible, or, (B) ‘subordinate’ structures that on the surface are of the form $\langle B_1 = \langle B_2, F_2 \rangle, F_1 \rangle$ are equivalent to structures of the form $\langle B_1', F_1' \rangle$, where F_1', B_1' are obtained from ‘merging’ $F_{1,2}$ and $B_{1,2}$, respectively. An instance of option (B) is shown in the non-recursive variant of Hungarian (1):

- (1) JÁNOS_{F₁} hiszi, hogy MARI_{F₂} ment el
 JOHN_{F₁} believes, that MARY_{F₂} left PFX
 Non-recursive variant: Focus: $\langle j, m \rangle$; Background: *x believes that y left*

Option (A) is ruled out for Hungarian Focus-marking, since subordinate or embedded Focus-marking is perfectly possible. The question to ask concerning Hungarian Focus is whether option (B) is obligatory for Foci that are in an embedded surface position. Data presented in this contribution point to the conclusion that there are a number of clearly circumscribable syntactic environments where the Background–Focus division in Hungarian can be recursive.

1. Hungarian simple sentences with a preverbal and a postverbal Focus are ambiguous between a “complex Focus” and a “multiple Focus” reading (according to the distinction from Krifka (1992)). The operator *csak* ‘only’ can attach to either (or both) Foci. When two copies of *csak* ‘only’ are present the we only have the embedded structure. (NB the two copies of *csak* cannot be absorbed into one.)

- (2) (Csak)JÁNOS_{F₁} olvasta (csak) A HAMLETET_{F₂}
 (Only) JOHN_{F₁} read (only) THE HAMLET-ACC_{F₂}
 Without *csak*: The pair $\langle j, h \rangle$ is the only one in the *read* relation. Or,
 John is the x for whom it holds that the y he read is Hamlet
 With *csak*: “Only John read only Hamlet”

2. Complex clauses can contain Focus in any of their clauses (as seen in (1)). They show the same ambiguity as (2), which (again) can be resolved by means of *csak* ‘only’.

3. In one kind of subordinate structure embedded Focus *needs* in general to be interpreted *in situ*. In Hungarian the demonstrative *az* ‘that’ can fill the Focus position in the matrix and act as a kataphoric placeholder for the subordinate clause (as in (3-a)). The question is whether such a sentence is equivalent one where instead of *az* as matrix Focus we have long Focus movement of from the subordinate clause (as in (3-b)). the subordinate clause

- (3) a. János AZT_{F₁} (nem) hiszi, hogy MARI_{F₂} olvasta a
 J THAT-ACC_{F₁} (not) believes, that MARY_{F₂} read the
 Hamletet
 H-ACC
 Affirmative: “What John believes is that it was Mary who read Hamlet”
 Negative: “What John doesn’t believe is that it was Mary who read Hamlet”
 b. MARIT_F (nem) hiszi János, hogy olvasta a Hamletet
 MARY-ACC_F (not) believes John that read H-Acc
 “It is Mary about whom John believes/doesn’t believe that she read Hamlet”

Pairs of the form (3-a)–(3-b) are not in general equivalent to each other. In the case at hand the affirmative version of (3-a) entails affirmative (3-b), but the converse does not hold, as (3-a) expresses a stronger statement. In (3-a) John’s belief is about the unique (possibly plural) individual who read Hamlet — (3-b) does not convey this information. In the negative variant of (3-a)–(3-b) this difference is perhaps more striking: In negative (3-a) what John does not believe is that it was Mary and only Mary who read Hamlet, which is compatible with Mary and others having read it. By contrast negative (3-b) says that Mary is the only person about whom John does not believe that s/he has read Hamlet.

The paper will conclude with a semantic analysis of partial Focus movement. It will build on previous work on Hungarian Focus as introducing an existence and maximality presupposition, generalised in order to cover propositions in Focus. The relationship between main clause and subordinate clause will be captured by means of choice functions, extending the analysis of partial *wh*-movement of Sternefeld (1999,2001) to affirmative sentences.

Bidimensional morphemes in Mehri (Modern South Arabic, South Semitic)

Sabrina Bendjaballah & Philippe Ségéral

CNRS UMR 7110 & Université Paris 7

sabrina.bendjaballah@linguist.jussieu.fr & philippe.segeral@linguist.jussieu.fr

1. Guerssel & Lowenstamm (1990), Lowenstamm (2003) propose a theory of templatic representations in which specific templatic sites express specific morphosyntactic features. This theory allows dedicated positions to express different values depending on the segment associated to the position. In addition to this possibility, we propose that a given segment may express different values depending on the position in the template it comes to be associated with. Our argument is based on data from Mehri (Modern South Arabic, South Semitic).

2. Mehri is a Semitic language with a root-and-pattern morphology (triconsonantal roots, templates), apophony, and preformants. Its verbal system displays the typical Semitic set of derived forms (causative, intensive, reflexive etc, *cf.* lines **va**, **vb**, **vc** etc in (1)). The aspectual/modal system shows the typical opposition between suffixed forms (perfective) and prefixed and suffixed forms (subjunctive), *cf.* two last columns in (1).

(1)	Mehri verbal forms (Johnstone 1975, 1987), √frk "to polish" ; tonic vowel underscored	<i>perfective</i>	<i>subjunctive</i>
va	<i>simple v. type a, active</i>	fəruuk	yə-freek
pass.	<i>simple v. type a, passive</i>	fəreek	yə-frook
vb	<i>simple v. type b</i>	fīrək	yə-frook
vc	<i>intensive conative v.</i>	foorək	yə-foorək
vh	<i>causative v.</i>	fruuk	yə-hafrək
vt₁	<i>reflexive v. type a</i>	fatrək	yə-ftīrək
vt₂	<i>reflexive v. type b</i>	əftəruuk	yə-ftəruuk
vš₁	<i>caus. reflex. v. type a</i>	šəfruuk	yə-šəfrək
vš₂	<i>caus. reflex. v. type b</i>	šəfeerək	yə-šfeerək

3. However the Mehri verb system displays a set of peculiarities that sets it apart in the Semitic family.

The most striking fact is the absence of medial gemination (*vs* Classical Arabic form II *kattaba*, Akkadian D-stem *uparris*, Classical Ethiopian I,2 *qābbārā* etc). This fact cannot be ascribed to a general constraint against consonant gemination in Mehri, since geminates do exist in the language, *e.g.* *dəllək*, 2ms perfective √dl "know"(**va**), *fəlləh*, 3ms perfective √flh "be ashamed" (**vt₁**).

At first sight, the opposition *fəruuk* (**va**) ~ *foorək* (**vc**) seems to parallel the opposition between the base form and the form with a long vowel between the first and the second root consonant observed in South Semitic (*e.g.* Classical Arabic *kataba* (I) ~ *kaataba* (III)). However, we argue that there is no phonological vocalic length in Mehri. The length in *foorək* is an automatic consequence of the presence of stress on the vowel between R₁ and R₂. More specifically, we show that Mehri is a language with Tonic Lengthening, and Closed Syllable Vowel Shortening, where the final syllable counts as an open syllable. Long vowels thus do not result from morphologically significant lengthening processes.

Finally, Mehri has apparently 2 forms with a -t- infix: *fətrək* (**vt₁**) and *əftəruuk* (**vt₂**). We adopt the analysis suggested by Lonnet (2006) according to which these forms are actually prefixed forms with a metathesis of the prefix and the first root consonant, thus paralleling Ge'ez forms III (*tāqāt(ä)lā* etc).

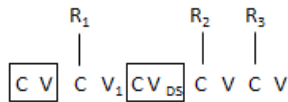
To summarize: in Mehri, there is neither medial gemination, nor internal lengthening, nor infixation.

4. According to Guerssel & Lowenstamm (1990), a central property of the Classical Arabic verb template is the presence of a special CV site, the "derivational syllable" (DS), located between R₁ and R₂ (2a). The assumption of such a site makes it possible to unify the forms with medial gemination, the ones with vowel lengthening, and the ones with consonantal infixation. In all cases, the DS is identified (by R₂, by V₁ and by a C-morpheme resp.).

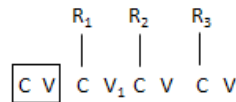
By contrast, there is no reason to assume that the template of the Mehri verb has such an internal site. It has the positions necessary for the realization of the root material, and an additional (initial) position hosting the consonantal preformants: (2b).

This said, the opposition *fəruuk* (**va**) ~ *foorək* (**vc**) raises an interesting question: if vocalic length does not mark the intensive-conative stem *foorək* as derived, then what is the mark of derivation? In all derived perfective forms (except for **vb**, to which we will immediately come back), the vowel located between R₁ and R₂ contains the element A: **vc** *foorək*, **vt₁** *fātrək* < /t-fārək/, **vš₂** *šəfəerək* (oo = A.U, ee = A.I). Therefore, we propose that it is the association of an A element to V₁ that marks the form as derived. That is, CV₁ is a position with a morphological role (this status is indicated by underlining in (2c)).

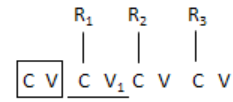
(2) a. Classical Arabic verb template



b. Mehri verb template



c.



5. We now turn to the association of the segments to the template. A, associated to CV₁, marks the form as *derived* (e.g. "intensive conative" in *foorək*). But the same marker may be associated with another position, CV_{pref}. In this case, it is a marker of *aspect/mood* (e.g. "subjunctive" in **vš₁** *yə-šāfrək*). Depending on the skeletal position it is linked to, the segment A is the exponent of different morphosyntactic features.

This property is not specific of A, but also holds of the thematic vowel V_{th}. In addition to its "natural position" between R₂ and R₃, V_{th} may be also associated to CV₁. Indeed, we show that the verbs of the type *fīrək* (**vb**) are the Mehri equivalents of the Classical Arabic verbs with thematic vowels other than a (i.e. verbs of types *labisa*, *kabura*). We propose that the argument structure properties are expressed in Mehri by shifting V_{th} between R₁ and R₂, i.e. to the CV₁ site defined in (2c).

The full set of attested combinations of segments and sites is given in (3). Both dimensions - segmental and skeletal - must be considered in order to derive the respective interpretations of the morphemes.

(3) segment ↓ \ site →	CV _{pref}	CV ₁	V ₂
A	x (<i>aspect/mood</i>) [vh, vš ₁ .subj]	x (<i>derivation</i>) [vc, vš ₂]	
V_{th}		x (<i>argument structure</i>) [vb]	x (<i>input of apophony</i> → <i>pass./subj</i>) [va etc]
h, š, t	x (<i>derivation</i>) [[vh, vš ₁ , vš ₂ , vt ₁ , vt ₂]		

6. To summarize, our analysis shows that the major characteristic of the Mehri verb template is the absence of an internal derivational site (Derivational Syllable). This absence is counterbalanced by the variation of the values of segmental markers in function of their docking site. A given templatic site may express different values depending on the segment associated to the position, and a given segment may express different values depending on the templatic site it is associated with.

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Topics, phases, and contexts of interpretation

Valentina Bianchi (Università di Siena) & Mara Frascarelli (Università Roma Tre)

A major problem for the theory of information structure (IS) is whether IS is necessarily a global property of a sentence, or it can be defined for proper subparts of a sentence, in particular, phases in the minimalist sense (vPs and embedded CPs). We tackle this question by considering topic structures in English and in Romance.

1. **Root and nonroot topic structures.** A prevailing view in the literature, stemming from Emonds (1970), is that topic structures are a root phenomenon; even when they appear in an embedded clause, topics are interpreted at the root (Portner & Yabushita 1998). This means that topic is a global IS category. This view, however, is challenged by several types of evidence.

a) As discussed by Haegeman (2004 and subsequent work), Romance Clitic Left Dislocation (CLLD) – actually, we argue, a subtype of it – and Clitic Right Dislocation (CIRD) are allowed in a variety of embedded clauses which constitute syntactic islands (notably, in «central» adverbial clauses), where English topicalization (TOP) and Left Dislocation (LD) are instead excluded.

b) We provide evidence that in English, TOP is actually not restricted to root(-like) clauses: it is allowed in complement clauses to verbs of saying and attitude verbs (though it is excluded in «central» adverbial clauses, as mentioned). Crucially, embedded topics need not be interpreted at the root, but they can be interpreted at the level of the complement CP: this is shown by the scope of the contrastive interpretation (1) and by the scopal limitation of a quantificational embedded topic (2). Contrary to TOP, LD is impossible in these contexts (3).

(1) Mary didn't tell us that Bill she had fired, and John she had decided to promote. (TOP)

(2) A compiler said [that every one of these entries we should thoroughly revise _]. $*\forall > \exists$

(3) * Mary didn't tell us that Bill, she had fired him. (LD)

c) Another relevant observation is that all kinds of topic structures, including LD, are allowed in direct speech, which is a maximally root-like environment:

(4) "I ain't saying' for you to stay" said Grampa. "You go right on along. Me – I'm stayin'." (J. Steinbeck, *The Grapes of Wrath*, Penguin Books, p. 143)

This evidence, taken together, highlights a (partial) typology of topic structures:

	«central» adverbial clauses	attitude complements	root-like environments
1. Romance CLLD/CIRD	√	√	√
2. English topicalization	*	√	√
3. English LD	*	*	√

2. **Contexts and topic interpretation.** We argue that the distribution of the various types of topics is determined by their different interpretive import. Krifka (2007) points out that IS phenomena are divided in two categories: some of them are directly related to the dimension of Common Ground (CG) management, that is, the ordered set of conversational moves (assertions, questions, corrections...) which determines the way in which information is added to the CG; other IS phenomena, instead, have no impact on CG management, but exclusively relate to the truth-conditional information contained in the CG (Krifka's CG content).

Type 3 Topics, here exemplified by English LD, pertain to CG management. Building on Rodman (1974), we show that they introduce a shift of the current Aboutness topic (in the sense of Reinhart 1981). Following Krifka (2001), we assume that this kind of topic constitutes a speech act on its own, whereby the speaker invites the hearer(s) to open a different file card in the CG for update. This is why the Aboutness-shift topic necessarily has a root nature: speech acts that affect the conversational dynamics are restricted to root environments, i.e. to unembedded phases. (We return below to direct speech.)

As for type 1 topics, it is well known that CIRD, and the relevant subtype of CILD, have no aboutness or contrastive function; they syntactically mark familiar (or GIVEN) constituents. GIVENness/familiarity is calculated on the basis of CG content, but it does not affect the conversational dynamics: as type 1 topics do not pertain to CG management, they need not be restricted to the root. Note that this IS phenomenon is allowed in any CP (and, according to Belletti 2004 a.o., in the vP phase for CIRD): this means that retrieval of information from CG content is available at any phase level.

The most intriguing type of topic is type 2, here exemplified by English TOP, which can be found in nonroot environments, but is more restricted than type 1. A type 2 topic has a contrastive function, in that it is taken to belong to a contextually salient set of alternatives: this is why a sentence containing a contrastive topic is implicated to convey partial information, and the assertion of a sentence containing a contrastive topic is taken to answer a subquestion implied by a more general superquestion (Büring 2003) about the whole set of alternatives. We adopt Truckenbrodt's (2006) proposal that verbs of saying and attitude verbs introduce a partial, derived context (the attitudinal state of the main clause subject) within the main context (the CG), and the complement clause has an update effect on this derived context. Thus, the contrastive function of an embedded type 2 topic – evoking a salient set of alternatives – can be defined w.r.t. this derived context, yielding a genuinely nonroot interpretation. On the other hand, type 2 topics are excluded from non-attitudinal embedded clauses, like «central» adverbial clauses, because the latter do not introduce a derived context against which the contrastive topic may be interpreted, and they are arguably islands for covert movement of the topic, wherefore the embedded topic cannot be interpreted against the main CG either.

A further question is why a derived attitudinal context cannot license a nonroot interpretation for an Aboutness-shift (type 3) topic. We propose that in indirect speech/attitude reports, the derived context can be partially characterized as to its content, but not w.r.t. its management. It is possible to «narrow down» the context set of possible worlds compatible with the matrix subject's attitudinal state by intersecting it with the proposition expressed by the embedded clause (Truckenbrodt 2006, 283): however, it is the speaker, not the matrix subject, who is responsible for conveying this proposition, as shown by the possibility of *de re* intrusion into the embedded clause (5a). The matrix subject is *not* the source of the update.

- (5) a. John thinks [that *Stevie's dog* is a stray dog]. (report of a non-contradictory belief)
b. ! John thinks: «*Stevie's dog* is a stray dog». (report of a contradictory belief)

In a slogan, the derived contexts of indirect attitude reports have a content dimension, but not a management dimension: this is why they cannot license Aboutness-shift topics (cf. (3)).

We claim that this is also the core difference between indirect speech and direct speech: in the latter, the subject of the verb of saying is responsible for the proposition updating the derived context (cf. (5b)); thus, direct speech not only specifies the content of the derived context, but also provides information about its management. This is why a directly reported clause has the hallmarks of a root sentence, and it allows for Aboutness-shift topics (cf. (4)). The presence of a management dimension correlates with a shifting of the contextual parameters (Kaplan 1977) to which grammatical person and tense are anchored.

3. Concluding remarks. The non-uniform distribution of the three types of topics leads us to conclude that the status of phases w.r.t. IS-related categories is not merely dependent on their being Spellout domains, but depends on their relation with the conversational dynamics: different syntactic phases can locally access a context for interpretation in different ways. We conclude that IS phenomena do not necessarily have a global nature, but their syntactic distribution in root and nonroot phases is determined by interface requirements.

The independence of negative concord and Jespersen's Cycle

Anne Breitbarth
Ghent University

The present paper discusses the diachronic interaction of Jespersen's Cycle (JC) and the use of indefinite pronouns, determiners and adverbs in the scope of negation.

1. Jespersen's cycle and NC. In the literature on the historical development of negation, a connection is frequently made between the availability of (certain types of) negative concord (NC) and particular stages of JC (e.g., Abraham 1999; 2003, Zeijlstra 2004, Van der Auwera & Neuckermans 2004, Van Gelderen 2008). Often, this connection is understood as NC being a form of 'strengthening' a sentential negation marker in the same way a newly grammaticalized negator does under JC. However, many languages have a form of NC without ever entering JC, so the type of NC must be related to (a stage of) JC in a less direct way. Furthermore, by only focussing on NC, other diachronic or synchronic interactions between indefinites and sentential negation are glossed over. Haspelmath (1997:202) for example argues for the following diachronic connection:

- | | | | |
|----|--------------------------------------|-----------|-------|
| 1. | negation on constituent only | [V-NI] | > |
| 2. | negation on V – postverbal NI | [(N)V-NI] | > |
| 3. | negation on V – post-& pre-verbal NI | [NV-NI] | > 1.' |

That is, a language marking negation only on the indefinite(s) can come to acquire neg-marking on the verb as well, first in the form of non-strict negative doubling, with strict negative doubling (Giannakidou 1997) as the end-point of the development. Under influence from JC (among other factors), viz. the loss of a verbal negation marker, this development may return to a [V-NI] stage. In the context of this diachronic cycle, Haspelmath does not consider languages of the type [NV-I], i.e., languages where negation is only marked on the verb. Given the common development of indefinites from being licensed in 'more positive' contexts to being restricted to 'more negative' ones, however, type [NV-I] may interact with JC in a language as well and give rise to NC as a result. Furthermore, the ability of n-words to co-occur with each other (negative spread) may be subject to diachronic change. The literature on the development of negation has hardly looked at such changes or their connections to JC.

2. The development of NC in Low German. An example for such a development is found in the history of Low German (LG). Using a corpus spanning the 9th-16th centuries, we demonstrate the following developments from Old Low German (Old Saxon) (OLG, 800–1200) to Middle Low German (MLG, 1250–1650):

- (i) older OLG (*Heliand*) strongly prefers n-free NPI indefinites (the *not ... any*-type in English) in negative clauses, avoiding negative doubling (the *not... no*-type) with the sentential negator *ni*: (1);
- (ii) in later OLG negative doubling (*not ... no*-type) becomes obligatory (2);
- (iii) MLG replaces the preverbal marker *ni* by *nicht*. In general it disallows negative doubling (**not ... no*) and it innovates negative spread (*no one .. nothing*): (3).

- (1) *so is io endi ni cumit*
thus it.GEN ever end NEG come
'thus the end of it will never come' (Heliand 1324)
- (2) *thát iu nian scátha ni uuírthid*
that you.DAT no damage NEG become
'that you suffer no damage' (EsG.53,31-1)
- (3) *Na sunte Micheles daghe 1349 scal nemen nenne rok dragen ...*
after St. Michael's day 1349 shall no one no cloak wear ...
'No one shall wear any cloak after St. Michael's day 1349 ...' (Braunschweig 1380)

That is, we see a rise of negative doubling during the OLG period, and its later demise coupled with a rise of negative spread in MLG. Pre-theoretically, this development can be attributed to the weakening of the old preverbal negation marker *ni*, and therefore to an interaction with JC: While *ni* is sufficient to identify sentential negation in older OLG, not requiring indefinites in its scope to be n-marked as well, n-marking becomes more and more common in indefinites in the scope of negation as *ni* weakens. This leads first to obligatory doubling with *ni* in later OLG, and then to common negative spread in MLG. The present paper proposes a formal account of the historical developments, arguing however that JC and NC are in fact unrelated, and only interact by historical accident.

3. Account. Zeijlstra's (2004) otherwise successful account of NC and its interaction with JC across languages faces two problems when applied to the developments in LG (see Haegeman and Lohndal to appear for other empirical problems). First, it predicts OLG to be a negative doubling language because its negator (*ni*) is a syntactic head. This is fully true only in later OLG; in the language of the *Heliand*, it is only a marginal option. Second, it does not predict the availability of negative spread with the concomitant impossibility of negative doubling as found in MLG. For a language with a very similar system of NC as that of MLG, modern French, where the standard sentential negator *pas* cannot co-occur with n-words, but negative spread is available, Penka (2007) has proposed an extension of Zeijlstra's account. She distinguishes between n-words carrying a general uninterpretable negation feature [uNEG], which can be licensed by any carrier (overt or covert) of an interpretable negation feature [iNEG] and n-words carrying [uNEGØ], which can only be licensed by a covert OP¬.

Applying Zeijlstra's account and Penka's extension, the OLG preverbal marker *ni* must have been [uNEG] because (a) NPI indefinites can precede it (cf. (1)), meaning that a covert OP¬ projected by *ni* and scoping over the entire proposition is the carrier of [iNEG] licensing them, and (b) strict negative concord is an available minority pattern and becomes the only available pattern in later OLG. This means, however, that there is no obvious 'weakening' of *ni* during OLG, at least not in terms of a change in its formal features. In MLG the preverbal marker *ne/en* (< *ni*) can be shown not to participate at all in the expression of negation (even where it still occurs); sentential negation is expressed by newly grammaticalized *nicht*. It follows that the pre-theoretical notion of the 'weakening' of *ni* is at best understandable as its reanalysis and loss in MLG. We argue that what actually changes between older and later OLG is the features of n-words. Starting out as [uNEG], they are reanalysed as [uNEGØ] in later OLG, because the feature [iNEG] licensing them is provided by a covert OP¬ anyway. This reanalysis is actualized (Timberlake 1977) when a new [iNEG] negator (*nicht*) is grammaticalized: [uNEGØ] n-words are incompatible with it in MLG. The rise of negative spread is the result of (a) NPI-indefinites becoming increasingly restricted to non-negative NPI contexts in MLG, and therefore unavailable or at least dispreferred in the scope of direct (clause-mate) negation, combined with (b) the working of the functional default of marking the presence of negation on all indefinites in its scope.

(4)

	older OLG	later OLG	MLG
<i>ni</i>	[uNEG]	[uNEG]	n/a
<i>nicht</i>	n/a	n/a	[iNEG]
n-words	[uNEG]	[uNEGØ]	[uNEGØ]
NC	[NV-I] (/ [NV-NI])	[NV-NI]	[V-NI] (+ neg-spread)

The paper therefore shows that it is not JC that influences the changes in the interaction between negation and indefinites in its scope, but that changes in the licensing conditions on indefinites, independent of the start or progress of JC, are behind the changes in the types of NC found in the history of LG.

Prosodic strengthening in speech production and perception

Taehong Cho

Hanyang University, Seoul, Korea

tcho@hanyang.ac.kr

There has been a growing awareness among speech researchers that one of the major sources of systematic speech variation is prosodic structure, and that mechanisms underlying speech production and perception in a given language cannot be fully understood without taking prosody into account. (Here, the term 'prosodic structure' refers to the abstract organizational structure which determines the grouping and relative salience of speech units.)

To better understand how high-level prosodic structure is manifested in low-level phonetic phenomena, recent laboratory work has paid special attention to speech phenomena in the vicinity of three prosodically strong locations, i.e., two at the prosodic juncture (domain-initial and domain-final positions), and one under prominence (accented or stressed syllables). These three prosodic landmark locations are taken to be essential in forming a prosodic structure, and it has become increasingly evident that speakers mark each of these prosodic positions differentially with some form of phonetic strengthening, known as prosodic strengthening, which delineates the hierarchically-nested prosodic structure of speech utterances. In the first part of this talk, I will review some of the phonetic events that differentially signal boundaries and prominence of prosodic structure.

Given that prosodic strengthening often leads to enhancement of phonetic clarity and phonological contrasts, an important question is how the prosodic strengthening is related to phonetic and phonological enhancements that arise with clear speech (in the sense of H&H Theory, Lindblom, 1990). More specifically, to what extent is the strengthening local to prosodic landmark locations (dis)similar to the strengthening from clear speech which is assumed to be applicable globally over the entire utterance? How do these two different sources of 'hyperarticulation' interactively influence speech production? These questions will be addressed by examining effects of boundary and prominence on acoustic phonetic realization of syllables at the prosodic juncture in clear speech versus casual speech conditions in Korean.

Finally, I will briefly discuss how prosodically-driven phonetic variation, which is often marked by fine-grained, yet systematic phonetic details in speech production, is used by listeners in speech comprehension. I will end this talk by briefly sketching models that may adequately capture how speakers may strengthen segments in prosodic landmark locations during speech production and how listeners may use the resulting acoustic correlates of prosodic strengthening during word recognition.

Conditional Inversion in Russian

Federico Damonte (Univ. of Cambridge) – Jacopo Garzonio (Univ. of Padova)

Conditional Inversion (CI) is a crosslinguistically well known phenomenon which has not been analyzed in a detailed way since Embick and Iatridou's (1993) seminal work. In this talk we will describe Conditional Inversion in Russian, showing that what raises to CP is not the verb but the complex element formed by the verb plus the [+irrealis] particle *by*. Our analysis will also give a possible explanation to the obligatorily counterfactual interpretation of CI *if*-clauses in Russian. Russian, like English, can have CI only in non-indicative conditionals:

- (1) a. *Dumaet on èto, on ne prav.
thinks he this he NEG right
“If he thinks so, he is not right.”
- b. Dumal by on èto, on byl by ne prav.
thought BY he this he was BY NEG right
“If he thought so, he would be not right.”
- c. *Dumal on by èto, on byl by ne prav.

In the literature (Pesetsky 1989, Iatridou & Embick 1993 a.o.) CI in languages like English and German has been analyzed as I-to-C movement. As shown in example (1c) though, in Russian the fronted verb is obligatorily followed by the [+irrealis] particle *by*, a fact which is not accounted for by a theory in which only the verb moves.

Evidence that *by* and the verb move to CP is provided by the order of *by* and the sentential particle *že* (Padučeva 1987). With the conditional complementizer *esli* both the orders *že-by* and *by-že* are possible, with the former being slightly better (as confirmed by a search in the Russian National Corpus, which returns 17 cases of *že-by* and only 5 cases of the opposite order):

- (2) a. ?Esli že by on znal (by) pravdu, on otvetil by.
if PRT BY he knew BY truth he answered BY
“If he knew the truth, he'd answer.”
- b. *?Esli by že on znal (by) pravdu, on otvetil by.
if BY PRT he knew BY truth he answered BY

Under CI though, only the order *by-že* is grammatical:

- (3) a. Znal by že on pravdu, on otvetil by.
- b. *Znal že by on pravdu, on otvetil by.

Assuming that sentential particles like *že* are merged in the heads of dedicated Topic and Focus projections in a split CP layer, the word order in (3a) can be accounted for by phrasal movement from IP of the verb plus *by* over *že*. The word order in (2a) presumably reflects instead the basic order of heads in the CP layer. The higher *by* in (2) is in CP, like other Wackernagel elements, as shown by the fact that it can be doubled by a lower *by* in IP. We assume, following a similar analysis of Polish by Tomaszewicz (2009), that the higher *by* is in FinP and encodes a modal feature in the left periphery.

This analysis is sketched in (4):

- (4) [CP *esli* / *znal by* [Topic *že* [Finiteness *by* [IP *on znal by*]...]

This analysis correctly predicts that the subject can precede the verb in the absence of *esli* but then it is topicalized, as shown by the fact that it cannot be a bare negative quantifier (see Rizzi 1997 for

topichood tests in the left periphery):

- (5) a. [Topic *Ivan*] *znal by pravdu, otvetil by*.
Ivan knew BY truth answered BY
“Ivan...if he knew the truth, he would answer.”
b. *[Topic *Nikto*] *ne skazal by, my ne znali by*.
nobody NEG said BY we NEG knew BY
“If nobody had said (that), we would not have known it.”

Moreover, notice that CI is not totally optional in Russian. In fact, a conditional with a CI protasis can be interpreted only as counterfactual. This counterfactuality cannot be cancelled (Embick & Iatridou 1993; Bhatt & Pančeva 2006):

- (6) a. *Esli on byl by bol'nym, u nego byla by temperatura...i raz ona u nego est', on bol'noj*.
If he were BY ill at him were BY fever and since she at him is he ill
“If he were ill, he'd have fever...and since he has fever, we must conclude that he is ill.”
b. *Byl by on bol'nym, u nego byla by temperatura...#i raz ona u nego est', on bol'noj*.

We will explain this fact assuming that the complex element V + *by* is formed lower than TP in IP. Then it has to move through TP before moving to CP. In this way, the [past tense] feature is checked and the conditional is obligatorily counterfactual (see Iatridou 2000 on the grammar of counterfactuality). This analysis is sketched in (7):

- (7) [CP *esli / znal by* [TP *on ~~znal~~ by* [FP *znal by*]...]

When the conditional complementizer is present and no CI occurs, V plus *by* do not raise to TP. If our analysis is correct, it has some non-trivial consequences. Firstly, it seems that only a modal element like *by* can encode the appropriate features in the CP of a conditional protasis; secondly, the syntax of Russian conditionals shows that there are modal features in the left periphery of such clauses; thirdly, verb forms in *-l* are not intrinsically marked for past, but have to raise to TP. If time allows we will discuss further evidence that Russian Conditional Inversion is indeed comparable with the corresponding phenomena in Germanic and Romance languages.

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Domain mismatches: PF vs. LF and XP vs. X and AGREE

Eva Dobler, Mina Sugimura, Lisa Travis
McGill University

In this paper we argue that mismatches appear between PF and LF phases as well as between agreement domains and phases. In the first case, we show that this is a natural extension of Marantz (2007) once head movement is included, and in the second case, we show that this adds to the observations of Bobaljik and Wurmbrand (2005).

First we discuss the mismatch between LF and PF Spell-out of heads. Lexical causatives appear to constitute one domain at PF and LF while productive causatives constitute two (e.g. Marantz 2007, Travis 2000b). In Bantu causatives, the causative morpheme, *-ts*, triggers change in the root in a lexical causative and vowel insertion in a productive causative.

(1) BANTU (Simango 1999:72-73)

Base form	Lexical causative	Productive causative
tuluk-a <i>come out</i>	tulutsa <i>bring (sth.)out</i>	tuluk-itsa <i>make come out</i>
uluk-a <i>fly</i>	ulutsa <i>fly (sth.)</i>	uluk-itsa <i>make fly</i>
kwer-a <i>climb</i>	kweza <i>hoist (sth.)</i>	kwer-etsa <i>make climb</i>
vulal-a <i>be injured</i>	vulaza <i>injure (so.)</i>	vulal-itsa <i>cause to be injured</i>

In terms of semantics, lexical causatives famously can have a non-compositional meaning while productive causatives have a predictable interpretation as we see in the Bantu examples above as well as the Tagalog example below. Fodor's (1970) observation that *kill* does not equal *cause to die* further suggest the presence of two semantic domains.

(2) TAGALOG

Base form	Lexical causative	Productive causative
sabog <i>explode</i>	pagsabog <i>scatter</i>	pagpasabog <i>make explode</i>

Marantz accounts for these distinctions by proposing that the lexical causative morpheme attaches directly to the root while the productive causative morpheme is attached outside a category determining head.

(3) a. Lex. causative: $\sqrt{\quad} + \text{CAUSE}$ b. Prod. causative: $[\nu + \sqrt{\quad}] + \text{CAUSE}$

For Marantz, the category determining head ν in (3b) creates a domain edge for PF and LF. Destructive phonology and idiosyncratic interpretation are characteristics of the innermost domain. In this account, PF and LF domains would be expected to coincide.

In a framework that assumes Distributed Morphology and phasal Spell-out, however, it is conceptually possible for head-movement to create a mismatch between the syntax/semantics and the phonology. Head-movement can have an effect on the PF interface but not the LF interface. It has been observed that head movement does not affect semantic interpretation suggesting that heads are always interpreted in their Merge positions (see also Goldberg 2005). At LF, two syntactic domains are interpreted as two semantic domains. This can be explained through the nature of semantic representations as Matushansky (2006) points out. The same is not true of PF, however. If a head α in a phase A moves out of A before spell-out, α will not be given phonological content within A. α will be spelled out in in a later phase along with its landing site. In other words, material that has been merged in two different phases may be spelled out phonologically on the same cycle.

Not only is a mismatch between the extent of PF and LF domains conceptually possible, it is empirically supported. The reduplicative aspect morpheme has variable placement within a Tagalog productive causative (data from Skinner 2009:45, ex. 11).

(4) **Base form:** *ma- ka- pag- pa- hintay*

ABILITY-COMplete- CAUSE- E- wait

- | | |
|-------------------------------------|-------------------------------------|
| a. <i>ma-[kaa]-ka-pag-pa-hintay</i> | c. <i>ma-ka-pag-[paa]-pa-hintay</i> |
| b. <i>ma-ka-[paa]-pag-pa-hintay</i> | d. <i>ma-ka-pag-pa-[hii]-hintay</i> |

Skinner (2009) accounts for the variable placement of reduplicative morpheme by proposing that the aspectual morpheme lowers to the complex head of its complement. He argues that lowering can attach to any m-word within a phase (where his definition of m-word varies slightly from that of Embick and Noyer 2001). His analysis requires that all of the morphemes of the productive causative in Tagalog are spelled-out in one phase (Piggott & Newell 2008 present an analysis of Ojibwa inalienable possessives which also requires that a phonological domain contain material from two syntactic domains). The productive causative syntactically always contains two syntactic domains. In Tagalog, however, unlike Bantu, the productive causative constitutes one PF domain because of pre-spell out head movement. Crucially, the verbal root and the causative morpheme are still interpreted as two separate LF domains. While a lexical causative in Tagalog may be idiomatic (3), the productive causative never can be. Further, the productive causative has all of the semantic earmarks described in Fodor (1970), indicating the presence of two semantic domains.

While the productive causative is universally represented as two phases at LF, it can appear to be one LF agreement domain. We illustrate this with Japanese restructuring clauses. An embedded QP must have wide scope in the case of *ik* ‘go’ + V (5) but may have narrow scope in a construction with (*s*)*ase* ‘make’ + V (see Miyagawa 1987 for evidence that these predicates show restructuring behaviors):

- (5) *Midori-ga sono cafe-ni aisu-dake-ga tabe-ni ik-e(re)-ru.*
 Midori-NOM that café-to ice cream-only-NOM eat go-can-PRES
 ‘Midori can only go to that café to eat an ice cream.’ **can* > *only*; *only* > *can*
- (6) *Taroo-ga Hanako-ni keeki-dake-ga tabe-sase-(ra)re-ru.*
 Taroo-NOM Hanako-DAT cake-only-NOM eat-CAUSE-can-PRES.
 ‘Taroo can make Hanako eat only a piece of cake’ *can* > *only*; *only* > *can*

According to Bobaljik & Wurmbrand (2005), this sort of distinction should indicate that *ik* + V constitutes two agreement domains while (*s*)*ase* + V constitutes one agreement domain due to the lexical (*ik*) vs. functional (*sase*) nature of the restructuring predicates. The argument is that the nominative object in (5) is obliged to move out of the lower domain to be case-marked by the potential (Kuno 1973), forcing it to have wide scope. In (6), however, if there is only one agreement domain, the object may remain in-situ and be assigned case by AGREE. In this lower position it is able to receive a narrow scope interpretation.

We argue that both (5) and (6) contain two phase boundaries but only (5) contains an agreement boundary creating a different sort of mismatch. Productive causatives, then, constitute one agreement domain for the argument licensing of XPs, yet two phases for the interpretation of the predicate itself.

In summary, we argue that head-movement can create a mismatch between the syntax/semantics and the phonology in a framework that assumes Distributed Morphology and phasal Spell-out. If head movement occurs before Spell-out, it will bleed the Spell-out of the lower domain. It thus follows that subsequent domains may contain material from multiple syntactic domains when they receive a pronunciation at Spell-out. Head-movement will never extend the domain at LF, however, under the assumption that heads are always interpreted in their Merge positions. Further, as pointed out by Bobaljik and Wurmbrand, agreement domains do not necessarily match spell-out domains (phases).

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Language learning and brain activity: Real-time fMRI study of processing of prosody

Grzegorz Dogil, Institute for Natural Language Processing, Universität Stuttgart, Germany

The presentation aims at clarifying whether subjects can learn to increase activation in the brain, and to test the effect of this volitional control over recognition of emotional prosody. We want to uncover changes in functional connectivity of activated brain sites across stages of language learning. Moreover, we try to shed light on changes in the functioning of the brain at rest as language-task learning progresses and the grammatical skills consolidate.

Methods

Healthy subjects (N = 12, 7 experimental and 5 controls) underwent real time functional magnetic resonance imaging (rtfMRI) training. We used a system based on a 3-T whole body scanner, the Turbo Brain Voyager software and in-house written scripts running on Matlab. We chose the pars triangularis of the right inferior frontal gyrus as target region of interest (ROI target) for regulation. We selected it individually for each subjects using a behavioural task (processing of emotional prosody) that previously showed to reliably activate this site [1]. We extracted the signal time course in this ROI, transformed it into visual feedback, and used it to guide subjects' learning process in real-time. Before and after training subjects engaged in a prosody identification task and grammaticality judgements.

We used a recently developed method [2] to address changes in brain networks' effective connectivity and investigated each training-session of a pilot experimental subject. Finally, we studied changes in activation at rest by modelling rest phases as conditions of interest and comparing each training session for experimental and control subjects.

Results

Experimental subjects achieved control over brain activation in the ROI and were able to increase it at will. Their ability to identify emotional prosody improved as they learnt to contemporarily enhance activation in the ROI.

Effective connectivity initially increased in a widespread network of areas involved in language processing as well as in attentional load and memory recall. In the last phase of training the network shrank to the ROI and "linguistic" regions.

Across rest phases we observed a progressively increasing deactivation of the ventro-medial prefrontal part of the default-mode network [3] in those subjects who managed cortical self-regulation.

Discussion

We showed that the ability to process language might improve as an effect of the physiological self-regulation of its cortical underpinnings. This result provides the first evidence that the modulation of the language system through real-time fMRI affects related performances. We found learning-induced changes in effective connectivity that replicate previous findings [2]. Finally, we uncovered the effect of this learning process on the functioning of the brain at rest supporting existing literature on skill learning.

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Reflexive marking and oblique agents

Issue The paper deals with lexical types of the reflexive marker (refl) whose impact varies cross-Slavically. This is exemplified by the availability of oblique agents with (i) Reflexive Passive and (ii) Reflexive Impersonal. Apart from (a) the varying availability of optional by-phrases, the Slavic languages differ with respect to (b) verb classes allowing the formation of (i) and (ii), and (c) whether the agent may be realized as a null element in syntax or not. In order to be able to account for the source of (a), one needs to clarify the nature of the relation between (a), (b), and (c). What is at stake is the argument structure of verbs in the context of refl. The accounts of (i) and (ii) so far (see the references) leave unconsidered parts of the data, thus failing to cover the whole range of systematic variation regarding (a)–(c).

Classification of data Our empirical findings lead to a new systematic classification of the data which cuts across the classical split into East, West, and South Slavic. Three mixed groups of languages emerge instead, cf. table 1 and ex. (1)–(3). In Group I (Ru, BRu), refl combines only with transitive verbs (including verbs referred to as V-acc/non-acc, which alternatively subcategorize for Acc or a PP/subordinate clause, yielding impersonal structures in combination with refl), by-phrases are generally allowed. In Group III (Po, Cz, Slk, Slvn, BCS), refl combines with all verb classes (including unaccusatives) and by-phrases are generally excluded. In Group II (Ukr, Upper Sorb, Bg), refl combines with V-trans, V-acc/non-acc and V-intrans, but only its combination with V-intrans disallows a by-phrase. There seems to be a correlation between the expansion of refl to the various V-classes – (b) – and the availability of by-phrases – (a), observed already by Růžička (1986). However, a generalization that by-phrases occur only in languages restricting refl to V-trans would miss Group II. The promotion to subject of the internal argument of a transitive verb is not a necessary condition for by-phrase realization (contra ASU 1999), as evidenced by V-acc/non-acc and Ukr refl acc impersonal. Crucially, by-phrases are never compatible with V-intrans. On the other hand, Group III is heterogeneous with respect to (c). The affected argument may be projected as a null subject in Po, Slvn and in Croatian dialects (cf. R&MS 2003, Szucsich 2009) but not in Cz, Slk, and standard BCS, as evidenced by binding and control tests. The general exclusion of by-phrases in Group III thus cannot be attributed to the availability of null subjects with refl.

Analysis Assuming a two-level semantics distinguishing between Semantic Form (SF) and Conceptual Structure (CS) – cf. Bierwisch 1986, 2007, a.o. – with the aim of an as far as possible unified account, we propose two main lexical types of refl, cf. (4), (5) and table 2. Argument blocking refl (refl 1) – cf. (4) – is applicable only with transitive verbs including V-acc/non-acc. It may affect the internal argument (antipassives, genuine reflexives and reciprocals) or the external argument (reflexive passive, reflexive impersonal). (4) makes the affected argument an unbound SF-variable that is accessible for semantic modification (e.g., via a by-phrase in case the external argument is affected). This variable has to be interpreted at CS. Man refl (refl 2) – cf. (5) – applies to the highest available argument variable. The relevant variable is bound by the operator $Q_{arb-hum}$. Po, Slvn, and Croatian dialects additionally employ the operator $\lambda_{[-overt, arb-hum]}$ leading to the realization of a null subject. Due to the operators involved, refl 2 specifies the argument for an arbitrary human interpretation and excludes semantic modification via a by-phrase. Group I languages employ only refl 1, Group II and III languages employ also refl 2. To capture the difference between Group II and III, we propose that languages that employ two refls are parametrized as to whether the comple-

mentary distribution of the two refls is dependent on the [+/- transitive] specification of the predicate refl combines with – Group II, or the [+/- highest argument] specification of the argument affected by refl – Group III, cf. table 2. Consequently, Group III employs a version of refl 1 (refl 1') restricted to [-highest argument]. Refl 1' exclusively affects the internal argument of transitive verbs. Since here the external argument is canonically realized, a by-phrase is not an option. All cases where the external argument is affected are covered by refl 2, generally excluding by-phrase modification. Group II employs a version of refl 2 (refl 2') restricted to [-transitive] verbs. The remaining refl uses involve refl 1 allowing oblique agents in those cases where the external argument is affected. Ideally, the limited lexical inventory proposed should cover all relevant refl uses in Slavic.

Type	V-class	Group I		Group II			Group III				
		Ru	BRu	Ukr	Upper Sorb	Bg	Po	Cz	Slk	Slvn	BCS
refl passive – cf. (1)	trans	+	+	+	+	+	*	*	*	*	*
refl acc impers – cf. (2)	trans			+			*			*	
refl impers – cf. (3)	acc/non-acc	+	+?	+	+	+	*	*	*	*	*
	unerg			*	*	*	*	*	*	*	*
	unacc						*	*	*	*	*

Table 1: Compatibility of refl with verb classes and by-phrases. '+' – by-phrase possible, '*' – by-phrase impossible, filled cells – type not available

(1) *Reflexive Passive* (refl passive)

Fabrikata se stroi (ot čuždestranna firma). (Bg, ASU 1999: 5)
 factory-the refl build.pres.3sg by foreign company

(2) *Reflexive Accusative Impersonal* (refl acc impers)

(a) Tu buduje się szkołę (* przez robotników). (Po)
 here build.pres.3sg refl school.acc by workers
 (b) Dytnu myjet'sja (matir''ju). (Ukr)
 child.acc wash.pres.3sg.refl mother.instr

(3) *Reflexive Impersonal* (refl impers)

(a) Ob ètom (nami) uže govorilos'. (Ru)
 about this we.instr already talk.past.sg.n.refl
 (b) O tom se (*nami) hodně mluvalo (* všemi politiky). (Cz)
 about this refl we.instr much talk.past.sg.n all.instr politicians.instr

(4) Argument blocking refl: $\lambda P (\lambda y)_{-\alpha} (\lambda x)_{\alpha} [P (y)_{-\alpha} z (x)_{\alpha}]$

(5) Man refl: $\lambda P (\lambda y) OPz [P (y) z]$, $OP \in \{\lambda[-\text{overt}, \text{arb-hum}], Q_{\text{arb-hum}}\}$

Type	V-class	Group I		Group II		Group III	
		Ru, BRu		Ukr, Upper Sorb, Bg		Po, Cz, Slk, Slvn, BCS	
reflexive/reciprocal	trans	+ trans predicate	refl 1	+ trans predicate	refl 1	- highest argument	refl 1'
antipassive	trans					+ highest argument	refl 2
refl passive	trans						
refl acc impers (where available)	trans						
refl impers	acc/non-acc	- trans predicate		- trans predicate	refl 2'		
	unerg						
	unacc						

Table 2: Complementary distributions of Argument blocking refl (refl 1/1') and Man refl (refl 2/2')

Russian *-nibud'*-series and quantifier raising

Natalia Fitzgibbons

Russian *-nibud'*-series of indefinite pronouns consists of a *wh*-stem and a *-nibud'*-marker (1). Its distribution resembles the distribution of weak NPIs and free choice items, but closer examination reveals that it cannot be described in these terms. In this paper, I concentrate on the exact mechanism of licensing of *-nibud'*-items by quantifiers.

I argue for an analysis that captures a much wider range of data than the previous analyses of the distribution of *-nibud'*. The paper also provides evidence for Pereltsvaig's (2000) insight that *-nibud'*-items are not NPIs. The evidence consists in data that show that licensors of *-nibud'* do not form a natural class with respect to either downward monotonicity or (non)-veridicality (2a,b). In (2a), *vse* 'all' creates a downward entailing environment, but *nekotorye* 'some.of' does not; both of them license *-nibud'*. In (2b), all the adverbs but *vsegda* 'always' create a non-veridical environment (Giannakidou 1998), so *vsegda* would be expected not to license *-nibud'*, contrary to fact.

My data involving various quantifiers in Russian also provides support for Ferreira's (2005) conclusion that quantificational determiners and adverbs form a natural class in that both groups undergo QR. I present a novel empirical generalization that *-nibud'*-items are licensed by operators in the CP-domain, such as quantifiers that undergo quantifier raising (2a,b), interrogative (3a,a') and imperative (3b,b') operators, etc.

My approach makes the surprising prediction that quantifiers that license *-nibud'*-items must take wide scope. I predict that in a sentence that allows scope ambiguity, this ambiguity will disappear if one of the quantifiers licenses *-nibud'*.

To show this, we need to compare a minimal pair of two sentences which differ only in whether *-nibud'* is present. Moreover, each sentence needs to contain two quantifiers, one that licenses *-nibud'* and one that does not. My approach predicts that in a sentence where *-nibud'* is present, its licensor has to take wide scope; wide scope for the non-licensor will then be unavailable. Moreover, this scope contrast must survive in a word order where the non-licensor precedes the licensor.

This prediction is borne out. In (4), there are two quantifiers, *vse* 'all' and *čto-to* 'something'. Only *vse* licenses *-nibud'*, *čto-to* does not. My informants agree that only (4a) is scopally ambiguous. Significantly, the *-to*-item cannot take wide scope in (4b). This indicates that the licensor of *-nibud'* necessarily QRs to a position above the one occupied by the *-to*-item. (5a,b) show that this scope asymmetry survives in a word order where the non-licensing quantifier precedes the quantifier that licenses *-nibud'*.

This discussion provides an argument for covert QR in Russian, a language that is usually considered scope-rigid (6). The data in question also provides evidence supporting Wurmbrand's (2008) conclusion that there is no [+/- QR] parameter, that is, no language is scope-rigid as a whole.

In conclusion, I provide evidence that Russian *-nibud'*-items are not NPIs. Rather, they are sensitive to operators in a particular domain – CP. I concentrated on sentences where *-nibud'*-items are licensed by quantifiers that undergo QR and show examples where the quantifier licensing *-nibud'* necessarily takes wide scope. This is in striking contrast to the same sentences without *-nibud'*, where two scope construals are possible.

- (1) a. kto-nibud' b. čto-nibud'
 someone or other (SMN) something or other (SMTH)
 c. kakoj-nibud', etc.
 some or other (STH)
- (2) a. **Vse/Nekotoryje** mal'čiki pročitali **kakuju-nibud'** knigu/ **čto-nibud'**.
 All/ Some.of boys read STH book/ SMTH
 'All/Some of the boys read some book or other/ something or other.'
 b. Tvoj brat **vsegda/inogda/ často/redko čto-nibud'** delaet.
 Your brother always/sometimes /often/rarely SMTH does
 'Your brother always/sometimes/often/rarely does something or other.'
- (3) a. *Kto-nibud' mozet mne pomoč'.
 SMN can me help
 'Someone or other can help me.'
 a'. Kto-nibud' mozet mne pomoč'?
 SMN can me help
 'Can someone or other help me?'
 b. *Ivan privěz mne čto-nibud' iz Grecii.
 Ivan brought me SMTH from Greece
 'Ivan brought me something (or other) from Greece.'
 b'. Privezi mne **čto-nibud'** iz Grecii.
 Bring me SMTH from Greece
 'Bring me something (or other) from Greece.'
- (4) a. *Vse čto-to* sprjatali ot roditelej. $čto-to (\exists) > vse(\forall), vse(\forall) > čto-to (\exists)$
 All something hid from parents
 'Everyone hid something from their parents.'
 b. *Vse ot kogo-nibud' čto-to* sprjatali. $*\exists > \forall, \forall > \exists$
 All from SMN something hid
 'Everyone hid something from someone or other.'
- (5) a. *Čto-to* ot roditelej spjatali vse. $\exists > \forall, \forall > \exists$
 something from parents hid all
 'Everyone hid something from their parents.'
 b. *Čto-to* ot **kogo-nibud'** spjatali vse. $*\exists > \forall, \forall > \exists$
 Something from SMN hid all
 'Everyone hid something from someone or other.'
- (6) *Kto-to* ljubit vse. $\exists > \forall, *\forall > \exists$
 Someone loves everyone
 'Someone loves everyone.'

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Prosodic boundaries and spectral realization of French vowels

Cédric Gendrot and Kim Gerdes

The aim of this study is to relate spectral realization of vowels and prosodic hierarchy in continuous speech. The IRISA speech alignment system is used and formant values of oral vowels are automatically measured in a total of 500,000 segments from around 30 hours of journalistic broadcast speech in French.

This work is part of a larger scale study aiming at describing the variability of French vowels. With the help of very large automatically segmented corpora (Galliano et al., 2005), we were able to study a large number of contexts known to influence the realization of phonemes so as to quantify precisely their influence and their interaction. In previous studies we showed that the spectral realization of vowels was greatly influenced by their duration (Gendrot & Adda-Decker, 2005, accepted). Longer vowels were considerably hyperarticulated compared to shorter vowels. In other words, the longer the vowels, the larger the acoustic space they will occupy, being thus more and more distinct from each other. The link between the duration of vowels and their spectral realization (through their formant values) has been validated for a long time by Lindblom (1963) among many others since then.

Reasons for variation in vowel duration are multiple. Factors such as speaker's style and speech rate can of course greatly influence, but linguistic factors such as the phonemic context, the phoneme position in the syllable, the word, the syntagm or the utterance can be of great influence too. The 4 units lastly mentioned are also considered as prosodic constituents since specific intonation and duration patterns produced by speakers serve a demarcative function. The realized prosodic constituents are considered as being organized in a prosodic hierarchy, each constituent being embedded in a higher one: this is the strict layer hypothesis as claimed by Nespor and Vogel (1986) and followed by many others. In this thread, the relation between prosodic constituent boundaries of different levels and the duration of phonemes adjacent to these boundaries has been demonstrated. These boundaries have been more rarely investigated in terms of articulation and spectral measurements (for French, Fougeron for initial positions, 2001; Tabain for final positions, 2003). Results obtained showed that for a phoneme in an initial or final position of a prosodic constituent, the higher the constituent in the prosodic hierarchy, the more strengthened/hyperarticulated the phoneme will be at its boundary. They also showed that this strengthening is not necessarily linked to duration.

We intend to replicate these results on continuous speech rather than controlled read speech. We consider four prosodic categories which are either selected from segmentation (word internal positions, word boundaries and intonational phrases) or from syntactic chunking (accentual phrases). All French peripheral vowels are investigated - with the use of acoustic measurements only - on both initial and final positions of each prosodic category. Then we evaluate the vocalic space used by all peripheral vowels for each of these categories (keeping initial and final positions apart). According to the hypotheses previously developed, we expect to observe an enlarging of the vocalic space when going upwards in the prosodic hierarchy, i.e. from syllable, to word, then accentual phrase and finally intonational phrase. A measure of dispersion from the acoustic centre is also considered as a statistical validation; if the vowel is moving away significantly from the

acoustic centre (F1: 450 Hz; F2: 1450 Hz), then it is considered as a hint of hyperarticulation. We bear in mind that this measure is inappropriate in some ways as it's related to the measurement of vowels' centralization, which is only a secondary effect of vowel coarticulation. However, with all vowels moving away simultaneously from the acoustic centre, they necessarily get away from one another, thus favouring the phonemic identification (see Lindblom's theory of adaptive dispersion for an interpretation of this in the formation of vocalic systems).

As a result, we show that the level of prosodic constituent in French influences the acoustic realization of vowels at constituents' boundaries. Although significant differences can't be established for all levels and vowels, we observe a prosodic hierarchy (from syllable to word, then accentual phrase and finally intonational phrase) based on spectral measurement results, showing that the higher a vowel is in the prosodic structure of French, the more hyperarticulated it is (Cf. Figure 1 for initial positions).

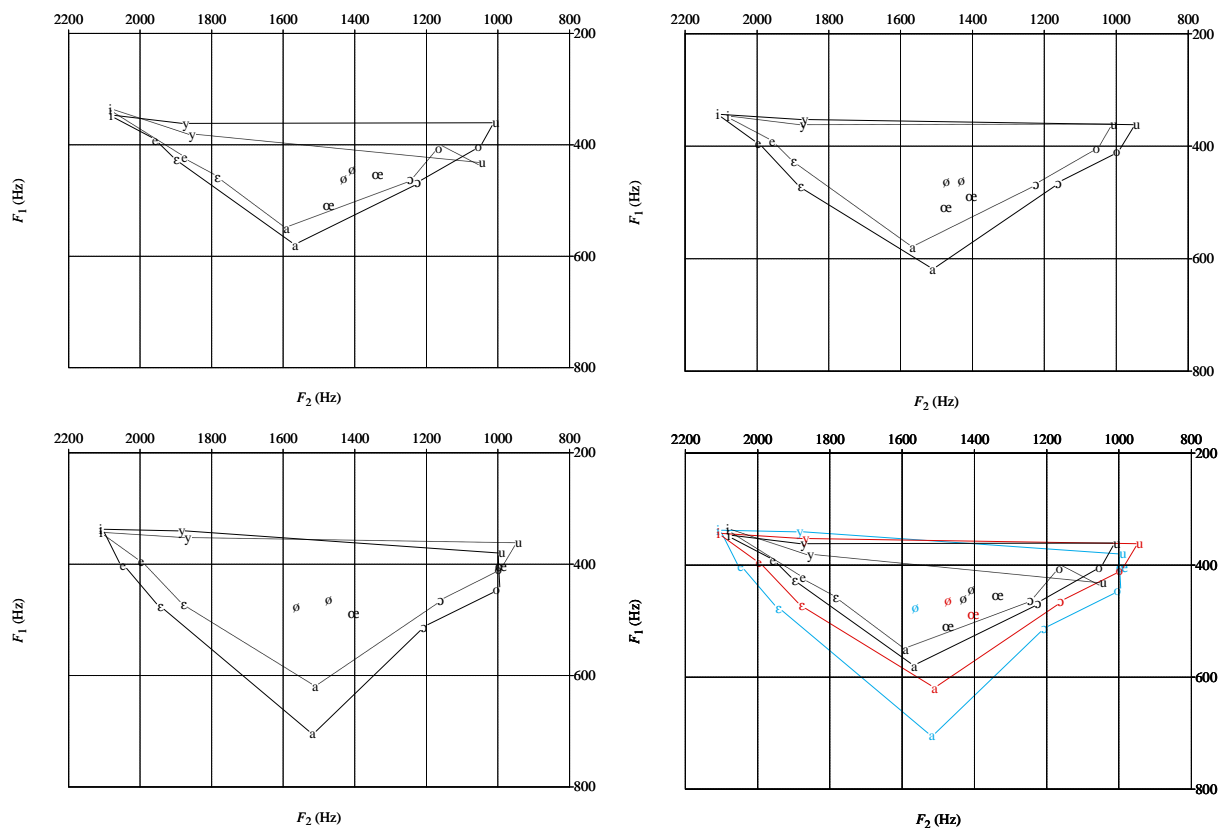


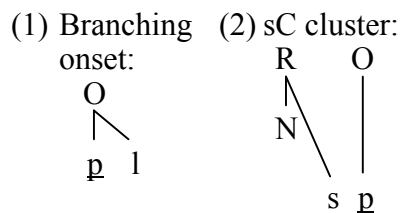
Figure 1.a.b.c.d. From left to right and top to bottom. Comparison of all prosodic categories level by level (*initial positions*): word internal, initial of word, accentual phrase and intonational phrase. The dashed triangle in the first three figures represents the lower level in each case. The bottom right figure summarizes all four positions.

Structural vs. Perceptual Constraints on sC Clusters: Evidence for a Coda Analysis of s

Heather Goad, McGill University

Clusters of the shape *s*+consonant (sC) defy many of the constraints that hold of true branching onsets. Thus, many researchers have proposed that *s* is organized outside the onset constituent containing the following C, as an appendix (e.g. Steriade 1982, Levin 1985, Goldsmith 1990, Vaux 2004) or coda (Kaye 1992; also Brockhaus 1999, Cyran & Gussmann 1999). Both of these proposals share the position that syllables are highly structured. Other researchers have argued that the differences between sC clusters and branching onsets can be explained by perceptual considerations alone (Fleischhacker 2001, 2005; also Zuraw 2007). In this paper, I argue that the patterns of behavior displayed by sC clusters are best captured through *s* analyzed as a coda. I show that patterns of cluster repair (contra Fleischhacker) as well as cluster well-formedness on the sonority dimension follow from the coda analysis.

Structural Issues: I consider obstruent+sonorant clusters (obstr≠s) to be branching onsets (1). Onsets are left-headed (underlined) (Kaye, Lowenstamm & Vergnaud 1990). Heads can host a range of segmental material. For branching onsets, this in effect means a wide range for place (lab/cor/dor+liq) as most languages require onsets to rise in sonority. Dependents, by contrast, are segmentally restricted. The structure I adopt for sC is in (2) (Kaye 1992): *s* is a rhymal dependent (coda). Regarding place, C₁ in a branching onset has more in common with C₂ in an sC cluster (*s*+lab/cor/dor), suggesting that sC clusters are right-headed. If onsets are left-headed, *s* must be outside this constituent, as in (2).

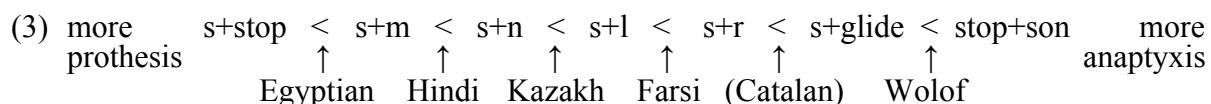


Critically, (2) holds for both initial and medial sC clusters (Kaye 1992). Evidence for the coda analysis of *s* (vs. the appendix option) follows from this. Consider, first, medial clusters. In Italian, rhymes of stressed syllables must branch (Chierchia 1986). When such a syllable lacks a coda, the vowel lengthens ([fá:to] 'fate'). Branching onsets pattern

with single onsets ([ká:pra] 'goat'). sC clusters, though, pattern with coda+onset clusters ([pás.ta] 'pasta'; cf. [pár.ko] 'park') consistent with (2). Turning to initial position, in *raddoppiamento sintattico* contexts, the first consonant in an onset geminates when the preceding word ends in a stressed vowel (Chierchia 1986). The pattern holds whether the onset is single (paltó pulíto [paltóppulító] 'clean coat') or branching (cittá triste [tʃittátriste] 'sad city'). The first consonant in an sC cluster, however, resists gemination (cittá straniéra [tʃittástraniéra], *[tʃittásstraniéra] 'foreign city'). This follows from the view that even word-initial sC clusters are syllabified as coda+onset as this is precisely the representation that holds for geminates.

Perceptual Issues: The line drawn between (1) and (2) is challenged by Fleischhacker's (2001) results on epenthesis in clusters in L2 acquisition and loanwords. Obstruent+sonorant is treated as a single class but sC does not behave uniformly, leading Fleischhacker to abandon a structural approach to the syllable (following e.g. Steriade 1999, Côté 2000).

Fleischhacker's survey of epenthesis in (3) confirms earlier findings (e.g. Broselow 1983) that speakers are reluctant to epenthesize into *s*+stop and outside of stop+sonorant: Egyptian Arabic uses anaptyxis for all clusters aside from *s*+stop; Wolof uses prothesis for all clusters other than stop+sonorant. In addition, though, Fleischhacker finds that many languages draw the boundary internal to the *s*+sonorant class, as shown in (3). (Catalan is in parentheses because although it draws a division between *s*+rhotic and *s*+glide, only prothesis is attested.)



On Fleischhacker's view, the epenthesis site is chosen to maximize perceptual similarity between the target form and the output. She predicts: (i) anaptyxis over prothesis in stop+son sequences; (ii) prothesis over anaptyxis in *s*+stop sequences; (iii) among *s*+son sequences, more anaptyxis as C₂ increases in sonority; and (iv) more anaptyxis in stop+son sequences than in fricative+son sequences. (i)-(iii) are supported. (iv) meets with problems; see below.

Problems for Perceptual Account: The perceptual qualities of *s* explain why 'appendices'

are so often limited to *s* and why these segments can be followed by stops: strident fricatives have robust internal cues for place and manner, ensuring their perceptibility in non-optimal contexts (Wright 1996). Yet perceptual constraints cannot, I contend, explain cross-linguistic preferences on C_2 sonority profile in languages that permit *sC* clusters. Consider (4).

(4)

<i>s</i> +	Spanish	French, Acoma	Greek	English	Dutch	German	Russian
stop	*	✓	✓	✓	✓	✓	✓
fricative	*	*	✓	*	✓	*	✓
nasal	*	*	(*)	✓	✓	✓	✓
lateral	*	*	*	✓	✓	✓	✓
rhotic	*	*	*	*	(*)	✓	✓

(4) reveals that *sC* clusters have an unusual distribution when viewed from a perceptual robustness perspective. I focus on word-initial position. Since the perceptibility of consonants in C_2 position in an initial *sC* cluster will be partly compromised by the preceding *s*, the most perceptible of consonants should occur after *s*. Masking should not be too severe here: Byrd (1994) observes that #*sk* clusters involve less overlap than *s#k* and *sk#*. Rather, the problem should be duration: Byrd finds that, in #*sk*, /*s*/ has the longest duration and /*k*/ the shortest compared to both *s#k* and *sk#*. If the relatively short duration of C_2 can be generalized to other #*sC* clusters, then segments with robust internal cues should be favored in C_2 position. Liquids should be the most optimal since they have clear formant structure. Nasals should be favored over stops since their manner (and to some extent their place) properties are present in the nasal spectrum. Stops, which have weak internal cues, should be the least optimal.

(4) shows, by contrast, that *s*+stop is favored. No language with *sC* forbids clusters of this profile. French and Acoma do not permit *s*+sonorant clusters at all (French has *s*+son in loans only). Depending on the status of marginal *s*+nasal clusters, Greek may fall into this class as well; otherwise, it permits *s*+son clusters of lower sonority than those of higher sonority. English and some Dutch dialects follow the same trend, although they are more permissive than Greek. (*s*+rhotic is licit in other Dutch dialects (Waals 1999); hence the parentheses.)

(4) suggests that *s*+stop > *s*+nasal > *s*+lat > *s*+rhotic (> = is more harmonic than). The favored profile in *sC* clusters is opposite to that for branching onsets; in the latter, obstr+liq > obstr+nas > obstr+stop. This is not unexpected on a structural account *if* all *sC* clusters are head-final, unlike branching onsets. If C_2 is the onset head in *sC*, it should respect the patterns holding of single onsets. Since obstruents are the optimal onsets (Clements 1990), a parallel should be observed between obstruents in C_1 position in branching onsets and stops in C_2 position in *sC* (not fricatives as well as stops, due to the preceding *s* (Wright 2004)).

I argue that the C_1C_2 asymmetry in branching onsets versus *sC* clusters is best captured under the view that *s* in *sC* is a coda. Recall from Italian that medial *sC* clusters are heterosyllabic in this language ([*pás.ta*], *[*pá:sta*]). If *sC* clusters are *always* syllabified as coda+onset clusters, then their profile should respect the preferences observed across languages for optimal syllable contact. Syllable contact will of course favor C_2 with lower sonority: Vs.TV > Vs.NV > Vs.IV > Vs.rV. As C_2 increases in sonority, the cluster prefers to be syllabified as a branching onset, but if this option is simply not available for *sC* clusters, then higher sonority *sC* clusters will be forbidden, regardless of their position in the word.

The profile in (4) parallels Fleischhacker's typology in (3): *sC* prefers prothesis when C_2 has lower sonority. Under the coda-onset analysis of *sC* adopted here, as the sonority of C_2 increases, prothesis will result in poor syllable contact; thus, anaptyxis will be a better repair.

Finally, the syllable contact account of *sC* well-formedness predicts that languages should treat *s*+son and fricative+son differently in epenthesis, as only the latter can form branching onsets. By contrast, Fleischhacker's perceptual account predicts that they should pattern the same. She predicts more anaptyxis in stop+son sequences than in fricative+son sequences ((iv) above), whether or not the fricative is *s*. But languages distinguish among fricatives in cluster repair: fricatives other than *s* pattern with stops in preferring anaptyxis (e.g. Farsi: *pIV*→[peIV], *fIV*→[feIV] vs. *sIV*→[esIV] (Karimi 1987)), as predicted under syllable contact.

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Simply Agree, not Multiple Agree

Liliane Haegeman (FWO/University of Ghent) & Terje Lohndal (University of Maryland)

1. Aim and scope of the paper. This paper is a case study of negative concord (NC) in West Flemish (WF) and bears on the general issue of the derivation of NC. It is also relevant for the definition of the concept Agree and for the role of locality in syntax.

- (1) K'(en)-een *nooit niets nie* gezien. (West Flemish)
I *en* have never nothing not seen
'I have never seen anything.'

Recent minimalist analyses (Zeijlstra 2004, 2008, Roberts 2008) have argued that NC (1) should be analyzed in terms of Multiple Agree (MA), according to which a unique interpretable feature ensures the valuation/checking of uninterpretable features on more than one constituent (Hiraiwa 2001: 69). If, as has been argued (Chomsky 2000, 2001), Agree is subject to strict locality conditions, then MA appears to be problematic because in configurations of MA, given that there are multiple constituents carrying the uninterpretable feature, the interpretable feature will not have a local relation with each of the constituents carrying the uninterpretable feature.

This paper shows that, at least with reference to the derivation of NC readings in WF, MA is not empirically adequate. We will show that locality, couched in terms of binary Agree and intervention, plays a crucial role in the derivation of NC readings. This, we argue, supports a local Agree analysis over an MA analysis, and we develop such an analysis.

2. NC as MA (Zeijlstra 2004). Zeijlstra (2004, 2008) proposes that in NC languages negative expressions are semantically non-negative indefinites, which are associated with an [*u*NEG] feature (2004: 245). The marker of sentential negation is also associated with an [*u*NEG] feature. The very existence of the [*u*NEG] feature(s) triggers the projection of NegP. Sentential negation as such is introduced by a covert negative operator OP_{\neg} in SpecNegP, associated with an [*i*NEG] feature. ' OP_{\neg} unselectively binds all free variables under existential closure' (2004: 247). In Zeijlstra's system OP_{\neg} [*i*NEG] in SpecNegP c-commands the (multiple) [*u*NEG] negative constituents on the νP edge. NC is then the result of MA between the multiple [*u*NEG] probes and the single [*i*NEG] Goal. An illustration of the application of Zeijlstra's system for WF is shown in (2) (from Zeijlstra 2004: 255). Since Zeijlstra (2004) assumes that *en* is also endowed with [*u*NEG], it will also participate in MA.

- (2) a. da Valère nie en klaapt
that Valère not *en* talks
'that Valère doesn't talk'
b. [_{NegP} OP_{\neg} [*i*NEG]] [_{νP} *nie* [*u*NEG] Valère [_{ν'} *en*-klaapt [*u*NEG]]]

Similarly, in WF (1) both *nooit* ('never') and *niets* ('nothing') and *en* are endowed with the [*u*NEG] feature; they will enter into MA with the [*i*NEG] feature of the probe (OP_{\neg}).

3. Empirical problem. Zeijlstra's proposal gives rise to a number of empirical problems for NC in WF. For him, after the merger/move of the individual negative constituents - each with its uninterpretable NEG feature - to the edge of νP , the abstract negative operator, OP_{\neg} , is merged in SpecNegP. This operator carries the interpretable NEG feature and gives rise to an across the board type of agreement. In (3), based on Hiraiwa's formulation ("AGREE applies to all matched features" Hiraiwa 2001: 69) we assume that MA, like binary Agree, is a two step process which first matches the features (ATB) and then leads to checking.

- (3) a. [_{NegP} OP_{\neg} [*i*NEG]] [_{νP} [B *u*NEG]] [_{νP} [C *u*NEG]] [_{νP} D *u*NEG]] \Rightarrow Match
b. [_{NegP} OP_{\neg} [*i*NEG]] [_{νP} [B *u*NEG]] [_{νP} [C *u*NEG]] [_{νP} D *u*NEG]] \Rightarrow Multiple Agree
c. [_{NegP} OP_{\neg} [*i*NEG]] [_{νP} [B ~~*u*~~NEG]] [_{νP} [C ~~*u*~~NEG]] [_{νP} D ~~*u*~~NEG]]

The problem with this implementation is that in WF, NC as ATB-agreement is not always available: as already observed in Haegeman and Zanuttini (1996) (H&Z), the nature and the

distribution of the specific negative element play a role in generating NC. In (4a) *niemand* ‘no one’ enters into an NC relation with *nie* ‘not’, in (4b) *niemand* enters into an NC with *geen studenten* ‘no students’. Examples such as these can be multiplied. However, though *niemand* can enter into NC with the negative marker *nie* (4a), and it can also enter into an NC relation with *geen studenten* (4b), *geen studenten* cannot enter into an NC relation with the negative marker *nie* as shown in (5a). (5a) becomes grammatical if the ‘simple’ negative marker *nie* is replaced by the more complex *nie meer* ‘no more’ (5b).

- (4) a. dank ik niemand nie gezien een
that I no one not seen have
‘that I didn’t see anyone’
b. dat ter niemand geen studenten gezien eet
that there no one no students seen has
‘that no one saw any students’
- (5) a. *dat ter niemand geen studenten nie gezien eet
That there no one no students not seen has
b. dat ter niemand geen studenten nie meer gezien eet
that there no one no students no more seen has
‘that no one saw any students any more’

On the basis of these and similar data, we conclude with H&Z (1996) that NC is sensitive to the type of negative constituent involved and to their relative positions. Since, as we will show in some detail, all relevant constituents (*niemand*, *geen N*, *niet*, etc.) can undergo NC in some combinations, it is by no means clear how Zeijlstra’s (2004) application of MA as an ATB procedure to derive NC can “distinguish” acceptable combinations of *n*-constituents that yield NC (4, 5b) from the unacceptable ones that don’t (5a). Instead, we will argue in favor of a local conception of Agree.

4. NC as stepwise binary Agree. We will develop an analysis that captures the co-occurrence restrictions on negative constituents in WF. Specifically, building on Pesetsky and Torrego (2007), we will adopt a revised version of binary Agree, given in (6).

- (6) *Agree*: α Agrees with β if α c-commands β , α and β share a feature F and there is no γ with the feature F such that α c-commands γ and γ c-commands β .

In the spirit of H&Z (1996), we propose that the derivation of NC readings involves a stepwise matching/agree process. We adopt (and motivate) the feature specifications in (7), to derive the contrast in (6):

- (7) a. *niet* ‘not’ [uNEG, uQ]
b. *niemand* ‘no one’ [uNEG, iQ] c. *geen* NP ‘no NP’ [uNEG]
d. *nooit* ‘never’ [uNEG, iQ] e. *nie meer* ‘no more’ [uNEG]

The cases in which Agree fails to generate NC readings will be shown to be the result of an uninterpretable feature not being valued because of an intervening element.

Our account also correctly predicts the additional intervention effects observed in (8): while (8a) allows NC between *niemand* and *niet*, this is not possible in (8b):

- (8) a. dat er atent entwien_[iQ] niemand_[uNEG, iQ] nie_[uNEG, uQ] kent
that there always someone no one not knows (NC)
b. dat er atent niemand_[uNEG, iQ] entwien_[iQ] nie_[uNEG, uQ] kent
that there always no one someone not knows (*NC)

We will show that our account also extends naturally to instances of DP-internal NC (9), first observed in H&Z and which remain unaccounted for in Zeijlstra’s system.

- (9) a. Ik een niet vele geen boeken.
I have not many no books
‘I have not many books.’
b. *Ik een vele geen boeken.

NOTES ON SOME PUTATIVE UNNATURAL CLASSES

Daniel Currie Hall (daniel.hall@meertens.knaw.nl)

Variatielinguïstiek, Meertens Instituut (KNAW), 1096 CJ, Netherlands.

1. **The theoretical importance of unnatural classes** Mielke (2004, 2008) argues that the existence of “unnatural classes” of segments in the phonological systems of natural languages provides crucial evidence that phonological features are emergent rather than innate and universal. An unnatural class is a set of segments that pattern together as triggers or targets of some phonological rule(s), but which cannot be straightforwardly characterized by a conjunction of feature values in any proposed universal system of features. Drawing on an impressive database of phonological inventories and processes, Mielke adduces many examples of such unnatural classes, generally presenting them in fairly cursory sketches. This brevity is necessitated by the broad scope of the project. However, as Mielke (2008: 104) himself points out, we should not be too hasty to conclude that existing feature theories are inadequate in any particular case. Because there are many potentially confounding factors, the analysis of any individual apparently unnatural class requires more careful consideration. While Mielke’s work presents an obvious challenge to theories of universal features, the full significance of the challenge cannot be determined until the specific cases are examined in greater detail. The purpose of this paper is to illustrate four instances in which further scrutiny reveals that a supposedly unnatural class is not so unnatural after all. These cases illustrate some of the kinds of phenomena that interact with natural classes to produce apparently unnatural results.

2. **Japanese** Both Mielke (2004, 2008) and Samuels (2009) mention Japanese *rendaku* as an example of a process affecting an unnatural class of segments. Generally speaking, *rendaku* voices a consonant at the beginning of the second member of a non-*dvandva* compound word (unless the second member of the compound already contains another voiced obstruent). Mielke (2004: 156–157) observes that the set of segments affected by *rendaku*, namely /t k s ʃ h/, can be described as having several (SPE) features in common “but there is a segment in the complement (/p/) which also shares all of these feature values. As a result, there is no way to distinguish the phonologically active class from the other segments in the language in terms of a conjunction of SPE features, so it is unnatural in the SPE framework.” This observation overlooks the stratification of the Japanese lexicon. *Rendaku* applies primarily—though not quite exclusively—to the native (*Yamato*) vocabulary (Vance 1987: ch. 10). In the *Yamato* stratum, [p] is in complementary distribution with [h] and [ɸ]: [p] occurs in geminates and after a moraic nasal, [ɸ] before the high back vowel, and [h] elsewhere (McCawley 1968: 77–78). As there are no word-initial geminates, there are no instances of [p] to which *rendaku* would necessarily be expected to apply. Word-initial [h] and [ɸ] undergo *rendaku* as expected, voicing to [b] as in (1).

- (1) a. [hafi] ‘chopstick’ [hako] ‘case’ [hafibako] ‘chopstick case’
b. [kawa] ‘river’ [ɸune] ‘boat’ [kawabune] ‘riverboat’

Mielke (2008: 14) gives one example of word-initial /p/ failing to undergo *rendaku*, in the word [genmaipan] ‘whole rice bread’ (< [genmai] ‘whole rice’ + [pan] ‘bread’). However, [pan] is a borrowing (from Portuguese *pão*). While some borrowed words (such as [karuta] ‘cards’) do undergo *rendaku*, the non-application of *rendaku* to [pan] and other /p/-initial words need not be a fact about /p/ *per se*. While the presence of word-initial /p/ may make the non-*Yamato* status of these words more obvious, and thereby help to preserve their immunity to *rendaku*, it is not necessary to say that the structural description of *rendaku* explicitly excludes /p/. Rather, one can describe the targets of *rendaku* simply as the natural class of voiceless obstruents.

3. **Pero** According to Mielke (2008: 144), “[i]n Pero ([Frajzyngier] 1989: 23, 33), morpheme-final stops undergo total assimilation to a following nasal [(2a–b)] or voiceless stop [(2c–d)], while a following voiced stop triggers not assimilation but epenthesis [(2e–f)].”

- (2) a. /pét/ + /nà/ → [pénnà] ‘he went out’ b. /tʃirép/ + /mù/ → [tʃirémmù] ‘our women’
 c. /káp/ + /kò/ → [kákkò] ‘he told’ d. /tʃúp/ + /kò/ → [tʃókkò] ‘he has shown’
 e. /káp/ + /dʒí/ → [kávídʒí] ‘eat (habit.)’ f. /tʃúg/ + /dʒí/ → [tʃúgídʒí] ‘talk (habit.)’

If this account is correct, it does not necessarily mean that Pero has an assimilation rule triggered specifically by the unnatural class of nasals and voiceless stops. Instead, it is possible to hypothesize that the structural description of the assimilation rule simply refers to non-continuants, but that in the case of voiced stops, a more specific epenthesis rule applies first, bleeding assimilation. (The situation is in fact more complicated than this. Frajzyngier (1989) gives (2e–f) not as examples of epenthesis before voiced stops, but rather of epenthesis breaking up obstruent clusters containing palatals; the same process also applies when the second consonant is voiceless. It appears that this and other epenthesis rules collectively bleed assimilation.)

4. Kiowa Citing Watkins (1984), Mielke (2008: 145) claims that “vowel lowering and raising” before nasals in Kiowa targets the unnatural class of vowels /i ī a ā u ū/ to the exclusion of /e ē o ō ɔ ɔ̃/. Before nasals, /i u/ lower to [ɪ ʊ], as in /min/ [mĩn] ‘about to’ and /gun/ [gũn] ‘dance/pf.’ Mielke assumes that the same process is at work in the raising of /a/ to [ɛ] in /jan/ [jɛn] ‘2sg/pat:pl/obj.’ However, examples such as those in (3) (Watkins 1984: 8) indicate that the raising is triggered by the preceding glide, not by the following nasal. Since the triggers, targets, and effects of vowel lowering and raising are all distinct, there is no reason not to treat these as two separate processes.

- (3) a. /sjan/ [ʃɛnʔ] ‘be small pl.’ b. /san/ [sãnʔ] ‘child’

5. Bukusu Bukusu is another case in which what Mielke describes as a single process operating on an unnatural class can be reanalyzed as two separate and natural processes. Nasals delete before fricatives and before other nasals, but not before other consonants. While fricatives and nasals clearly do not form a natural class, there is some independent motivation for treating nasal deletion as the result of two separate rules. Nasals assimilate in place to most other following consonants, and, as Mutonyi (2000) points out, there are no geminates in Bukusu. If we follow Mutonyi (2000: 178) in saying that “the deletion of nasals before other nasals results from a general ban in the language on sequences of identical segments,” then there is no need to unite this process with nasal deletion before fricatives, whereas if nasal deletion is a single process triggered by an unnatural class, then the absence of geminates is accidental.

6. Conclusions While it is obviously not possible to demonstrate within the scope of this paper that there are *no* unnatural classes in phonology at all, the cases discussed here provide examples of some ways in which the appearance of unnatural classes can arise, and illustrate the need for closer examination of the challenging cases presented by Mielke.

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‘Only’ decomposed and syntacticized (Daniel Hole/Universität Stuttgart)

In this talk, I argue for a decomposition and syntacticization of three different components of meaning in ‘only’-words like English *only* or *just*, or German *nur*, viz. EXCL(USION), SCAL(ARITY) and EVAL(UATION). These components of meaning are all – to different extents – acknowledged in the literature (Jacobs 1983, König 1991, Beaver & Clark 2008), but have so far not been identified as relating to different syntactic and scope positions. Evidence for the analysis comes from scope and focus projection phenomena and from blocking effects of a hitherto undescribed kind. Mandarin Chinese is identified as a language which has different ‘only’ words that surface in the scope positions of the three different components. The Chinese facts thus support the claim of a distributed syntax-and-semantics of ‘only’.

EXCL says that all non-trivial alternative propositions of ‘only’-sentences with a different focus value are entailed to be false; cf. (1). This is the most widely discussed component of meaning in ‘only’. The second component is scalar. ‘Only’-sentences may have focus values that correspond to scalar values, and the scalar focus value is underneath some threshold value (Jacobs 1983). (2a) may have a SCAL component as paraphrased in (2b). Mandarin Chinese has an ‘only’-word which is restricted to interact with scalar predicates. This is shown in (3) for scalar *cái* in comparison with unspecified *zhǐ*. The only infelicitous sequence is (3a)-(3b’), the one where scalar *cái* associates with a focus that is not contrasted with scalar alternatives, thus showing that *cái* is scalar. The third component of meaning is EVAL. ‘Only’-sentences often signal that the proposition in question specifies a state of affairs which is considered bad (4a). The evaluational component of ‘only’ words is often precarious, which may prompt language users to control for it in explicit graphemic (4b), intonational, or gestural ways. EVAL is a conventional component of meaning with many ‘only’-uses, which is demonstrated by the (hitherto undescribed) fact that certain contexts block the availability of EVAL completely. Such contexts are conditional clauses (as opposed to reason clauses) as in (5), or subordination with *to* in its sequential use (as opposed to its purposive use) as in (6). (I assume that the blocking effect is due to the lack of pertinent functional structure hosting EVAL in conditional clauses and sequential *to*-structures; see below for more related explanation.) The crucial point is that (5b)/(6b) *cannot* signal EVAL. The blocking of EVAL in some contexts supports the idea that its likely presence in other contexts ((5a)/(6a)) is not just a conversational implicature. The absence of EVAL in some non-blocking contexts (on a non-evaluational reading of (5a), e.g.) can be explained by the absence of an empty element in the scope position of EVAL (which is present in the evaluational reading). SCAL and EVAL are not usually kept apart in the literature (Jacobs 1983, König 1991), but a clear separation is called for, because in (7) scalar *cái* combines with a positive evaluation.

EXCL scopes at the *vP* level. Its position must be below the position of sentential NEG and modal operators. This is shown for NEG in (8) where, despite *nur*’s position c-commanding NEG, NEG may not be focal. For modals, (9) shows first that German *nur* may c-command modal verbs. Since the modal in (9b) is in the topicalized constituent it is plausible that in (9a), too, *nur* c-commands the modal. Still, the focus may not comprise it (10). (11) proves that the contrastive conjunction of two propositions under a possibility and a necessity modal, respectively, is not *per se* infelicitous. Temporal categories behave alike ((12)/(13)).

SCAL, by contrast, has negation in its scope; it is ‘not having time’ which is considered little in (14), not ‘having time’. Analogously for sentences with modals: In (9), for instance, what is considered little is not ‘his drinking tea’, but ‘the allowance for him to drink tea’.

EVAL, similarly, takes scope above modals and negation in ‘only’-sentences. Thus, on the evaluational reading of (6a), it is not implied that helping the poor, or becoming a millionaire as such, is bad. Instead, (6a) implies in the relevant reading that these things are not good reasons to leave one’s family; the evaluational predicate thus scopes above the purposive link between the two propositions. Cinque (1999) has Mood_{evaluative} scope above epistemic modals. Mood_{evaluative} would appear to be a plausible scope position for EVAL, but I

lack positive evidence to this effect; quite the contrary. (15) shows that EVAL takes scope underneath *obviously*, with *obviously* assumed to sit in $\text{Spec,Mod}_{\text{epistemic}}$ or $\text{Mood}_{\text{evidential}}$, and both of them scoping under $\text{Mood}_{\text{evaluative}}$. The English (and German) data that I have at the moment doesn't allow for a decision as to whether EVAL really scopes above SCAL. Turning to Chinese again, we can add an important set of observations. The crucial observation is that different 'only'-words may co-occur in a single sentence. Two examples are given in (16)/(17). The linear sequencing between *zhǐ*, *buguò* and *éryǐ* is fixed. Moreover, *bú-guò* is, though lexicalized as an 'only'-word, morphologically transparent as 'not-exceed'. The pattern that I would tentatively like to extract from these sentences is that *éryǐ* is in the (stranded) EXCL position; *búguò* is in the SCAL position (cf. *cái* in (3a)/(7)); and *zhǐ* is even higher in the EVAL position. Note that, in Chinese, it is the norm for quantificational particles to be in their scope positions (Huang 1982). The surface constituency is, thus, [*zhǐ*_{EVAL} ... [*búguò*_{SC} ... [... *éryǐ*_{EXCL}]]]. This complements the conclusions arrived at with the help of independent evidence relating to 'only'-words in English and German.

- (1) a. Paul **only** ate [cookies]_F. b. 'Paul ate nothing else but cookies.'
- (2) a. Paul has **only** [one]_F shirt. b. 'The value 1 is less than the average value for the number of shirts owned by male adults in western countries.'
- (3) a. Wǒ **cái** yǒu yìbǎi kuài qián ne... b. ... méi yǒu liǎngbǎi kuài.
I only_{SC} have 100 \$ money PRT not have 200 \$
'I only have 100 \$...' '... and not 200 \$.'
b. Wǒ **zhǐ** yǒu yìbǎi kuài qián ... b'. ... méi yǒu biéde dōngxi.
I only have 100 \$ money not have other things
'I only have 100 \$...' '... and not other things.'
- (4) a. Paul is **only** a plumber. b. Paul is "**only**" a plumber.
- (5) a. I'm to move out of my room **just because** your mother's coming? (easily understood as implying that the addressee's mother coming is not a good reason to move out)
b. I'm to move out of my room **just if** your mother's coming? (speaker *cannot* be understood as implying that the addressee's mother coming is not a good reason to move out)
- (6) a. He left his family **just to**_{CAUS} {help the poor/become a millionaire}. (easily understood as implying that helping the poor or becoming a millionaire is not a good reason to leave one's family)
b. He left his family **just to**_{SEQ} {end up in the gutter/become a millionaire} soon after. (speaker *cannot* be understood as implying an evaluational component)
- (7) Xìngkuī xiànzài **cái** bā-diǎn zhōng. 'Luckily, it's only 8 o'clock now.'
luckily now only_{SC} 8-o'clock
- (8) dass er **nur** {nicht/keinen} Tee trinkt(, wohl aber Kaffee/wohl aber verkauft/wohl aber Kuchen isst) 'that he only doesn't drink tea(whereas he does drink coffee/does sell tea/does eat cake)'
- (9) a. Er hat_i **nur** TEE trinken dürfen t_i. 'He was only allowed to drink TEA.'
b. [TEE trinken müssen t_j] hat_i er **nur** t_j. 'He was only allowed to drink TEA.'
- (10) Er hat **nur** Tee trinken dürfen, nicht aber Brei essen (dürfen[#]müssen).
'He was only allowed to drink tea, but {wasn't allowed to[#]didn't have to} eat pap.'
- (11) [His stay at the hospital wasn't so bad after all.] Er hat [Tee trinken dürfen], nicht aber [Brei essen müssen]. 'He was allowed to drink tea, but didn't have to eat pap.'
- (12) Ich weiß, dass er **nur** Tee getrunken hat(, [#]und demzufolge nicht jetzt Schweinefleisch isst).
'I know that he only had tea ([#]and is thus not eating pork now).'
- (13) Er hat Tee getrunken und isst jetzt Schweinefleisch. 'He had tea, and now he's eating pork.'
- (14) [Don't worry about him calling off your appointment.] He **just** doesn't have time.
- (15) Obviously, he's **just** a liar./He's obviously **just** a liar./He's **just** obviously a liar.
all three may imply: 'His being a liar is bad', not: 'His obviously being a liar is bad.'
- (16) Wǒ **búguò** shuō shuō **éryǐ**. (17) Tā **zhǐ búguò** ná xiùzi kāiyīkāi bítì. [Hou ed.
I only say say only (s)he only only take sleeve wipe.away snot 1998: 62]
'I just said it [without really meaning it]. 'He only had his sleeve to wipe away the snot.'

State Composition

E. Matthew Husband, Brown University

matthew_husband@brown.edu

Since at least Verkuyl (1972), aktionsart has been considered a property of VPs minimally resulting from a combination of the verb and its internal argument. This has been demonstrated most clearly in the literature on telicity where certain verb-argument combinations allow for terminative interpretation while others permit only durative interpretation. The properties shared by nominals and events and the manner of their composition has been the source of much debate, leading to a rich literature on event composition. Left out of this debate, however, has been the role that arguments might play, if any at all, in the composition of states. One area deserving of further research is the availability of existential interpretation of subjects (EIS) in states. Fernald (1994) noted that the availability of EIS depends on the internal argument (1, 2).

- | | | | |
|-----|----|------------------------------|--------|
| (1) | a. | Monkeys live in trees. | (*EIS) |
| | b. | Tycoons own banks. | (*EIS) |
| (2) | a. | Monkeys live in these trees. | (EIS) |
| | b. | Tycoons own this bank. | (EIS) |

Most accounts of (1) and (2) rely on discourse constraints. Kratzer and Selkirk (2007), for instance, propose that the availability of EIS is related to the requirement of a syntactically represented topic. Having quantificationally strong arguments to fill in as topics, the subject in (2) may remain low and receive existential interpretation. Weak arguments, however, cannot be topics (Jäger, 2001). With no other argument capable of being the topic, the subject in (1) must raise and becomes too high to receive existential interpretation. This analysis assumes that the weak/strong distinction between the objects in (1) and (2) accounts for the alternation, but there are other distinctions between *trees/banks* and *these trees/this bank*, and a wider range of arguments is needed to uncover the relevant distinction.

Examples (3–5) examine a wider range of arguments and demonstrate two broad classes of behavior (summarized in (6)). Statives with mass or bare plural objects completely block EIS (3). All other object types license EIS. Statives with bare numeral or weak determiner objects are generally less acceptable, though EIS is possible (4). Statives with weak quantifier, strong determiner, or strong quantifier objects are fully acceptable with EIS (5). This finding argues against the assumption that the availability of EIS in (1) and (2) results from the weak/strong distinction of objects. Instead, (3–5) make a cut around the mass/count distinction, similar to that found between atelic and telic events. States and events, then, are sensitive to the same mass/count object properties, suggesting they may be more similar than traditionally thought.

- | | | | |
|-----|----|--|--------|
| (3) | a. | Monkeys live on land/in trees. | (*EIS) |
| | b. | Tycoons own silverware/banks. | (*EIS) |
| (4) | a. | Monkeys live in a/three tree(s). | (?EIS) |
| | b. | Tycoons own a/two bank(s). | (?EIS) |
| (5) | a. | Monkeys live in several/many/the/these/each tree(s). | (EIS) |
| | b. | Tycoons own many/the/this/every bank(s). | (EIS) |

(6)		Mass Noun/ Bare Plural	Bare Numerals/ Weak Determiners	Strong Determiners/ Weak-Strong Quantifiers
		Bare Plural	*EIS	?EIS
				EIS

Given this similarity, I propose that state and event VPs are composed via the same mechanisms while the distinction between states and events arises from their relationship to their subjects. Event VPs, as properties of events, map subjects to event part-structures; however, state VPs, as properties of states, map states to subject part-structures. I propose that these part-structure mappings are mediated by voice heads which also introduce the subject (Kratzer, 1996). The stative voice head specifies a part-structure mapping between the temporal trace of the subject and the state (7). Assuming Kratzer’s (2004) composition of VPs (which maps objects to eventualities) and the availability of stages of individuals (Carlson, 1977), the availability of EIS results from the homogeneity of the VP. When the VP is homogeneous (has a mass object), the state applies to homogeneous stages of the subject (8a). As these stages compose the individual itself, no particular spatiotemporal stage of the individual is acquired and EIS is blocked. When the VP is quantized (has a count object), the state applies to only a quantized stage of the subject (8b). This quantized stage, as a particular spatiotemporal slice of the individual, guarantees existence.

- (7) $\llbracket \text{Voice}_S \rrbracket = \lambda x \lambda s [\text{Holder}(s)(x) \ \& \ \forall s' [s' \leq s \rightarrow \exists x' [x' \leq x \ \& \ \tau(x') = \tau(s')]]]$ where x ranges over stages of individuals and s over states
- (8) a. $\llbracket \text{Tycoons own banks} \rrbracket = \lambda s [\text{Holder}(s)(\text{tycoons}) \ \& \ \forall s' [s' \leq s \rightarrow \exists y' [y' \leq \text{tycoons} \ \& \ \tau(y') = \tau(s')]] \ \& \ \text{own}(s)(\text{banks}) \ \& \ \forall x' [x' \leq \text{banks} \rightarrow \exists s' [s' \leq s \ \& \ \text{own}(s')(x')]]]$
- b. $\llbracket \text{Tycoons own this bank} \rrbracket = \lambda s [\text{Holder}(s)(\text{tycoons}) \ \& \ \forall s' [s' \leq s \rightarrow \exists y' [y' \leq \text{tycoons} \ \& \ \tau(y') = \tau(s')]] \ \& \ \text{own}(s)(\text{this-bank}) \ \& \ \forall x' [x' \leq \text{this-bank} \rightarrow \exists s' [s' \leq s \ \& \ \text{own}(s')(x')]]]$

I also argue that reference to homogeneous or quantized stages of individuals clarifies several other stage-level/individual-level phenomena, including possible temporal modification of individual-level predicates (Percus, 1997) and the triggering of lifetime implicatures (Musan, 1997).

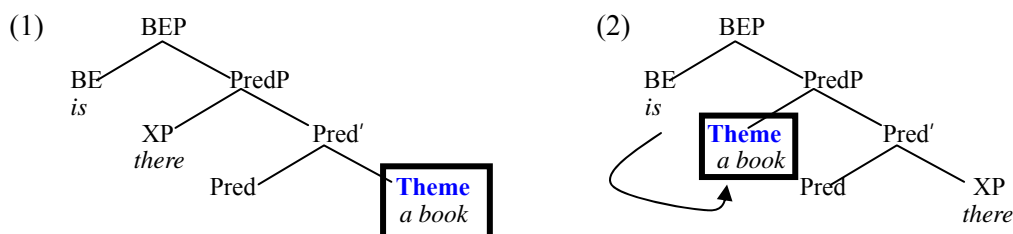
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Russian Existentials, Edge Effects, and Cyclic Linearization

Hakyung Jung (SNU) & Heejeong Ko (SNU)

Debate on existentials. The base-position of the post-copular theme NP has received extensive attention in the discussion of existential constructions. One possibility is to view the post-copular NP as a predicate of a small clause embedded under the copula BE, as described in (1) (Stowell 1978, Williams 1994, Hazout 2004, Hartmann & Milićević 2007, Blaszcak 2007, Jung 2008, *inter alia*). Alternatively, one may consider the post-copular NP to be the subject and construe the pre-copular expletive as an inverted predicate, as depicted in (2) (e.g. Hoekstra & Mulder 1990, Moro 1997, den Dikken 1995). The extractability of a constituent out of the theme NP crucially bears on this question. As shown in an English existential (3), sub-extraction out of the theme NP is possible, which supports the view that the theme NP is a predicate (not a subject), since it does not show CED effects (in the sense of Huang 1982). In defense of (2), however, Moro (1997) argues that expletives *there* turn the copula BE into an L-marker (*à la* Chomsky 1986), so that sub-extraction out of the theme becomes possible. This paper provides novel evidence for the analysis (1) on the basis of *Edge Effects observed in Russian*, which cannot be reduced to CED effects. In doing so, we also explain previously unnoticed *asymmetry between subject and object in Russian scrambling* and tie it to general edge effects under *cyclic linearization*.

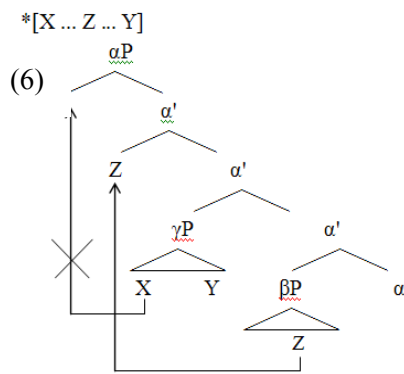


- (3) [**Which man**]_i do you think that there was [**a picture of t_i**] in the room?

Subject-object asymmetry. Russian is a scrambling language and thus word order seems relatively free. Some orderings are not allowed, however. As shown in (4b), adnominal PP ‘of this age’ can be separated from the host noun ‘children’ by a (high) adverb. (4b) shows that sub-extraction out of subject position is in principle possible. Notably, however, the *vP*-internal argument ‘these books’ cannot intervene between the two elements originated in subject position, as in (4c). This is surprising given that sub-extraction out of subject position is possible (as in (4b)) and object scrambling is also possible in Russian. If (4d) were possible, we expect that (4c) would be grammatical, contrary to fact. Moreover, sub-extraction out of object position shows a different pattern from (4). As illustrated in (5), adnominal PP ‘of this series’ can be separated from its host noun ‘books’ in object position by an adverb (5b), or by the subject (5c). Thus, one cannot simply say that an argument cannot split other argument constituent to explain away (4c).

- (4) a. Očevidno **deti** **etogo vozrasta** čitajut eti knigi. [adv - [S₁- S₂] - V - O]
 obviously children of this age read these books
 ‘Obviously children of this age read these books.’
 b. **Deti** očevidno **etogo vozrasta** čitajut eti knigi. [S₁ - adv - S₂ - V - O]
 *c. Očevidno **deti** eti knigi **etogo vozrasta** čitajut. [adv - S₁ - O - S₂ - V]
 d. [_{CP} Adv S₁ O [t₁ S₂] t₂ V] [scrambling of S₁ and O]
- (5) a. Očevidno Ivan čital **knigi etoj serii**. [adv-S-[O₁-O₂]-V]
 obviously Ivan read books of this series
 ‘Obviously Ivan read books of this series.’
 b. **Knigi** očevidno **etoj serii** Ivan čital. [O₁-adv-O₂-S-V]
 c. Očevidno **knigi** Ivan **etoj serii** čital. [adv - O₁ - S - O₂ - V]

Proposal. We propose that the subject-object asymmetry observed above is an instance of Edge Effects expected under cyclic linearization. Ko (2007) argues that elements merged as a constituent on the edge of a Spell-out domain cannot be separated from their domain-mates due to the interaction between cyclic linearization (Fox & Pesetsky 2005) and probe-goal search (Chomsky 2001).



Cyclicity and edge effects. Suppose that X and Y are merged on the edge of αP . A domain-internal Z may precede X and Y or follow them, but Z cannot move into X and Y. Moreover, neither X nor Y is in the search (c-command) domain of α , and thus neither X nor Y can undergo movement within αP under probe-goal Search. Thus, within αP , Z cannot intervene between X and Y. If αP is a spell-out domain, this ordering restriction must be preserved in the higher domains due to cyclic linearization (*i.e.* order preservation after Spell-out; see Fox & Pesetsky 2005). Ko (2007) shows a number of patterns that fall into this generalization from Korean/Japanese scrambling and floating-Q constructions. We argue that the data in (4-5) are exact replica of the K/J patterns.

If νP is a spell-out domain, we expect that the edge elements (subject) ‘children’ and ‘of this age’ in (4) cannot be separated by their νP -domain-mate ‘these books’ (4c), **Edge Effect!**. In contrast, the non-edge elements ‘books’ and ‘of this series’ in (5c) can be separated by subject via νP -internal scrambling. Both the edge and non-edge items may move over a νP -external item when a higher head probes it: (4b, 5b)

Edge effects in existentials: Crucially, our analysis on (4-5) further contributes to the controversy on the existential constructions in (1-2). If (1) is on the right track, we would not expect Edge Effects for the theme NP. On the contrary, if (2) is correct, we expect Edge Effects with the theme NP, assuming that a predication domain forms a Spell-out domain (cf. den Dikken 2007, Ko 2009). The data strongly supports the former analysis (1). As shown in (7a), canonical Russian existential constructions consist of a pre-copular locative PP, BE, and a post-copular theme NP. As in (7b), a high adverb ‘obviously’ can intervene between ‘in buildings’ and ‘of this street’ in locative PP. However, the theme ‘lifts’ may not separate the two elements in locative PP: (7c). Note that this is exactly what we have seen in (4) with subject sub-extraction. In contrast, theme NP and its adnominal PP can be separated either by a high adverb in (8b), or by a locative PP ‘at them’ in (8c). This is what we have observed with the object in (5). In short, the symmetry between (4) and (7), and between (5) and (8) shows that *locative PPs behave as an edge element* like a transitive subject, whereas *theme constituents behave as a non-edge element* like an object. The ordering restrictions seen in (4) and (7) can then be understood as one and the same Edge Effect. This, in turn, lends support for the analysis (1) where the theme is generated within the complement domain.

- (7) a. Očevidno **v zdanijax etoj ulicy** est’ **lifty**. [adv - locative [**PP₁ - PP₂**] - BE - **theme**]
 obviously in buildings of this street are lifts
 ‘Obviously there are lifts in buildings of this street.’
 b. **V zdanijax** očevidno **etoj ulicy** est’ **lifty**. [locative **PP₁** - adv- **PP₂** - BE - **theme**]
 *c. Očevidno **v zdanijax** **lifty** **etoj ulicy** est’. [adv - locative **PP₁** - **theme** - **PP₂** - BE]
- (8) a. Očevidno **u nix** est’ **deti etogo vozrasta**. [adv- locative **PP** - BE - **theme** [**NP - PP**]]
 Obviously at them are children of this age
 ‘Obviously they have children of this age.’
 b. **Deti** očevidno **etogo vozrasta** u nix est’. [theme **NP** - adv- theme **PP**- loc **PP** - BE]
 c. Očevidno **deti** u nix **etogo vozrasta** est’. [adv - theme **NP** - loc **PP** - theme **PP**- BE]

Edge Effects \neq CED effects. Note crucially that the Edge Effects observed with subject (4) and locative PP (7) cannot be reduced to CED effects. As shown in (4b) and (7b), the subject or the locative PP may in principle undergo sub-extraction: hence, no CED effects. Thus, the ungrammaticality of (4c) and (7c) must be explained by a special property that comes from their configurational position, *the edge position*. The fact that the theme NP (8) shows the same distribution as the transitive object cannot be explained by Moro-style *L-marking* to which cyclic linearization is not sensitive. Thus, (3) in conjunction with (4-7) can be best explained by the view that the theme NP is located within the predicate position (1). By doing so, our proposal also ties Russian scrambling/existentials with K/J scrambling discussed in Ko (2009) as *Edge Effects* - which in turn supports the approaches pursuing cyclic linearization and probe-goal Search.

Position and height asymmetries in hiatus resolution:
An acoustic analysis of Korean VV sequences

Hijo Kang (Stony Brook University)

Vowel hiatus is often resolved by the weakening (elision or gliding) of one of the two vowels. With regard to this weakening, two asymmetries are known to exist: V_1 (POSITION asymmetry: Casali 1996, 1997) and high vowels (HEIGHT asymmetry: Rosenthal 1997) are more likely to be weakened than V_2 and non-high vowels, respectively. To account for these asymmetries, MAX-WI (Every word-initial segment in the input must have a corresponding segment in the output, Casali 1997) and $\{A\}=V$ (Particle $\{A\}$ must be linked to a mora, Rosenthal 1997) have been proposed. However, weakening of V_1 is also found in ‘within morpheme’ environments, where V_2 is not a word-initial segment (e.g., Millar 2007) and thus MAX-WI is not a sufficient explanation for the height asymmetry. Furthermore, the markedness constraint $\{A\}=V$ is not an explanation on its own, without understanding of the source of this pattern.

Following Ohala’s (1993) argument that typological patterns are caused by human articulatory and/or auditory mechanisms, this study tests the hypothesis that both asymmetries have a phonetic source, which has become phonologized in many languages. It was hypothesized that the durational variations arising from speech rate manipulation would reveal changes in adjacent vowels similar to those that arise in hiatus diachronically. Specifically, the SS_1 (the Steady State of V_1) was predicted to be reduced in fast speech more than the SS_2 (the Steady State of V_2) and the SS ’s of high vowels more than the SS ’s of non-high vowels. We analyzed VV sequences in Korean, where stress and accent do not interfere with vowel duration, predicting that a vowel’s proportion of the duration would vary more in V_1 and high vowels than in V_2 and non-high vowels. Thirty nonce words of $p’V_1V_2$ (/i/, /u/, /e/, /o/, /ʌ/, and /a/ for V_1 and V_2 , $V_1 \neq V_2$) plus 9 $p’V_1pV_2$ (/i/, /u/, and /a/ for V_1 and V_2) and 4 $p’V_1GV_2$ (/i/, /u/, or /a/ for V_1 and V_2 and /w/ or /j/ for G) control words were recorded by six Korean speakers (3 male, 3 female), three times as slow and fast speech rates. The SS_1 (the Steady State of V_1), TP (Transitional Period), and SS_2 (the Steady State of V_2) of the vowel sequences were analyzed and their proportions in words were calculated. The results showed that the proportions of SS_1 were reduced in fast speech (29.6% (SD=1.86) \rightarrow 23.5% (5.28)) but the change was not significant ($F(1,5)=1.52$, $P=0.27$). Rather, SS_1 was significantly shorter than SS_2 irrespective of speech rate ($F(1,5)=12.90$, $P<0.02$). This positional difference was not found in control words with an intervening consonant or glide ($F(1,5)=0.55$, $P=0.49$), which implies that the position asymmetry is not a general pattern in Korean prosody (See figures 1 and 2 on the next page). It was also found that high vowels were proportionally shortened more than non-high vowels in fast speech (‘height’ interacted with ‘rate’. $F(1,5)=7.16$, $P<0.05$).

The results partially support Ohala's view. The two asymmetries in hiatus resolution do seem to reflect the variation in ordinary speech. The weakening of V_1 can result from the fact that V_1 is relatively short and the weakening of high vowels can be due to the reduction of high vowels in fast speech. In the future, we need to see whether these patterns are found in other languages. Moreover, perception experiments are needed to determine whether these variations will result in a misperception which could contribute to a phonological change.

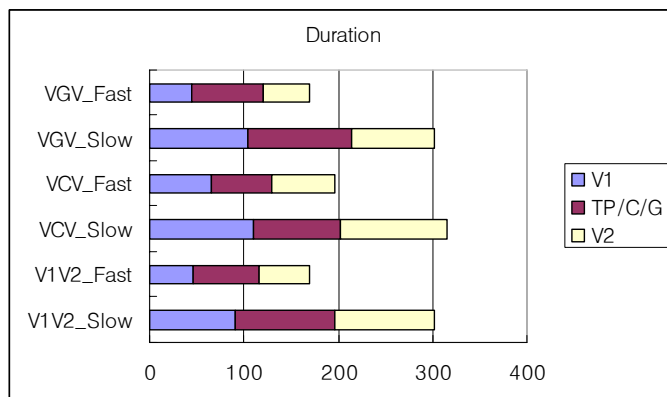


Figure 1. Duration of V_1 , TP/C/G, and V_2 for three word types at two speech rates

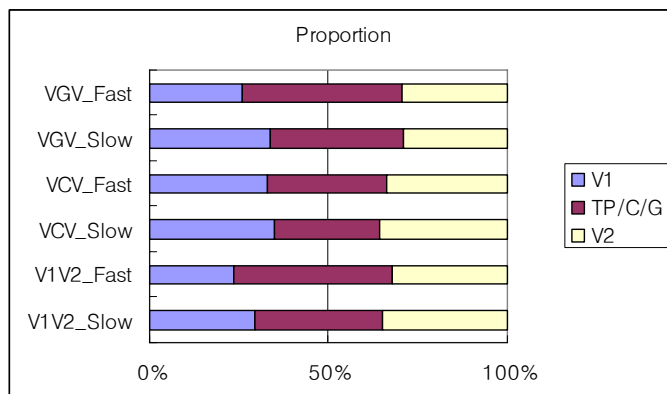


Figure 2. Proportion of V_1 , TP/C/G, and V_2 for three word types at two speech rates

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Switch-Reference as an Interface Conspiracy

Stefan Keine, Universität Leipzig

Claim: Switch-Reference (SR) refers to the phenomenon that verbs may be marked morphologically for whether their subject is coreferent with the subject of another clause or not (Jacobsen 1967). Previous treatments implement this by directly or indirectly comparing the reference of the two subjects (Finer 1984, 1985, Watanabe 2000). By contrast, I propose that no comparison of reference takes place and that the relevant morphological markers, despite appearance, do *not* encode reference relations. Thus, SR does not exist theoretically. SR arises as a consequence of how the semantic and morphological interfaces deal with a given syntactic structure. The crucial evidence comes from ‘unexpected’ SR marking, problematic for most previous treatments.

Empirical evidence: Although this abstract is restricted to data from Amele (Roberts 1987, 1988, 1990, 2001), the account extends straightforwardly to other SR systems. In the Amele serial verb construction, all verbs but the last one bear the SAME SUBJECT (SS) marker if the subject is coreferent with the subject of the next clause (see (1)). Otherwise they are marked for DIFFERENT SUBJECT (DS) (cf. (2)). Crucially, in Amele DS marking may also freely occur with coreferent subjects, leading to a multiple event reading ((3a)). Conversely, SS markers appear if unergatives/transitives are combined with unaccusatives regardless of coreference relations ((3b)). SR marking stands in complementary distribution with overt conjunctions ((4)).

- (1) Ija hu-**m**-ig sab j-ig-a (2) Ija ho-**co**-min sab ja-g-a
1 SG come-SS-1 SG food eat-1 SG-TOD.P 1 SG come-DS-1 SG food eat-2 SG-TOD.P
‘I came and ate the food.’ ‘We came and you ate the food.’
(Roberts 1988: 49)
- (3) a. Eu 1977 jagel November na odo-**co**-b cul-ig-en
that 1977 month November in do-DS-3 SG leave-1 PL-3 SG-REM.P
‘That was in November 1977 that he_i did that and then he_i left it for us.’ (ibid: 61)
b. Ija co-cob-**ig** wa hedo-i-a
1 SG SIM-walk-1 SG.SS water finish-3 SG-TOD.P
‘As I walked along the rain stopped.’ (Stirling 1993: 87)
- (4) a. Ho busale-i-a qa dana age qo-ig-a
pig run.out-3 SG-TOD.P but man 3 PL hit-3 PL-TOD.P
‘The pig ran out but them men killed it.’ (Roberts 1988: 55)
b. *Fred ho-**co**-b / ho-**ho**-b qa/ca uqa sab j-igi-an
Fred come-DS-3 SG SIM.come-DS-3 SG but/and 1 SG food eat-3 SG-FUT (ibid: 58)

Theoretical background: I presuppose a Minimalist architecture of grammar with post-syntactic semantic interpretation and morphology such as Distributed Morphology (Halle and Marantz 1993, 1994). Specifically, vocabulary insertion is conditioned by the Subset Principle and Specificity (Halle 1997). Furthermore, the external argument is taken to be base-generated in Spec,vP (Marantz 1998) and introduced semantically by *event identification* (Kratzer 1996).

Proposal: I argue that the data in (3) and (4) should be taken at face value: SR does *not* code coreference relations. Rather, the DS and SS markers are the context-sensitive spell-out of the coordination head &^o conjoining the two clauses. Both VPs and vPs can be conjoined (cf. (5a) and (5b), respectively). The semantic interpretation of &^o is given in (6). On the morphological side, &^o is spelled out as the DS marker in the context of two complete v’s (introducing an agent; Chomsky 2001), and as the SS marker otherwise (see (7)). In the case of VP conjunction, there exists only one v^o, and hence only one agent. Both events are identified. The same subject interpretation follows straightforwardly. &^o is realized as SS ((1)). If two complete v’s are

conjoined, the two events are not unified, as coordination takes place higher than v . Consequently, the two agents may but need not differ and a reading with two unrelated events emerges. $\&^\circ$ is spelled out as DS ((2), (3a)). If at least one of the two conjoined v 's does not introduce an external argument (being defective in Chomsky's sense), the default SS marker is inserted into $\&^\circ$ ((3b)). Conjunctions cannot cooccur with SR markers because they compete for insertion into the same position ($\&^\circ$). Thus, their complementary distribution follows without further ado ((4b)). (4a) involves TP coordination with qa spelling out the head $\&^\circ$. This is evident as in (4a) both verbs are marked for tense, in contrast to all previous examples.

(5) a. *VP coordination*

$[_{VP} \text{ AGENT } v^\circ [_{\&P} \text{ VP } \&^\circ \text{ VP }]]$

b. *vP coordination*

$[_{\&P} [_{VP} \text{ AGENT}_1 v^\circ [_{VP} \dots]] \&^\circ [_{VP} \text{ AGENT}_2 v^\circ [_{VP} \dots]]]$

(6) $[[\&^\circ]]_{\langle\langle s,t \rangle, \langle\langle s,t \rangle, \langle s,t \rangle \rangle} = \lambda P_{\langle s,t \rangle} \lambda Q_{\langle s,t \rangle} [P \& Q]$

(7) *Vocabulary items*

$/DS/ \leftrightarrow [\&^\circ] / [_{VP}_{\text{COMPL}} \text{ ____ } vP_{\text{COMPL}}]$

$/SS/ \leftrightarrow [\&^\circ]$

Extensions: The above system can be extended to derive other apparent SR systems as well. Variation among these systems is restricted to the interpretation of VP and vP coordination at the interfaces. Markers for $\&^\circ$ may be differently specified and $\&^\circ$ may receive a slightly different interpretation. These interface variations capture a wide range of attested SR systems. Additional supportive evidence for severing the alleged SR markers from the reference of the subjects comes from the observation that there exists a large variety of languages that, like Amele, allow DS marking with co-referring subjects. Some examples are Choctaw (Davies 1986), Chechen and Ingush (Nichols 1983*a,b*), Lenakel (Lynch 1983), Oirata (Donohue 2008), Yuman languages (Langdon and Munro 1979, Gordon 1983). The reverse, SS marking without coreferent subjects, is attested as well, e.g., in Seri (Marlett 1981, 1984, Farrel et al. 1991). These widely observed patterns strongly suggest that the alleged SR markers do not directly code reference relations. Rather, they code properties of the syntactic structure, which, by general principles of semantic interpretation, may receive a double-predicate interpretation.

Theoretical implications: The present analysis handles the data without global computation (the two subjects are not compared in any way) and is hence compatible with a phase-based notion of locality. Furthermore, it does not involve indices, as the syntax does not impose restrictions on reference relations. It thus adheres to the *Inclusiveness Principle*. Differences between Amele and, say, English only arise through the interfaces (Amele has context-sensitive spellout of $\&^\circ$, English does not). Underlyingly, the structures and mechanisms are identical.

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Native and non-native prosodic cues in segmentation and learning

Sahyang Kim, Hongik University, Seoul, Korea

Mirjam Broersma, Donders Centre for Cognition, Radboud University Nijmegen, and Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands

Taehong Cho, Hanyang University, Seoul, Korea

This study investigates how listeners of two different languages, Dutch and Korean, make use of native and non-native prosodic cues in word segmentation and whether they can learn a non-native prosodic cue and generalize the newly-learned prosodic pattern to novel segmental strings via repeated exposure to the cue.

Using an artificial language learning paradigm (Saffran et al., 1996), the study first tested how Dutch and Korean listeners use prosodic cues in word segmentation such as pitch and duration at the edges of a prosodic boundary. Dutch and Korean are quite different in terms of the distribution of pitch cues in speech. Dutch has lexical stress, which is frequently placed in word-initial position (Quene, 1993). This indicates that Dutch listeners are likely to relate a high pitch cue to the word-initial position, although pitch is not the only acoustic correlate of stress. In addition, in the phrase final position, high pitch is one of the possible tonal patterns which is often accompanied by phrase-final lengthening. A high pitch cue without phrase-final lengthening, however, does not provide the most optimal prosodic boundary cue as they tend to co-occur.

On the other hand, Korean does not have contrastive lexical prosody and therefore word-initial position is not associated with any systematic pitch cue. It does, however, have a phonologically defined high pitch related to a prosodic phrase-final position (the Accentual Phrase final position), which is not generally accompanied by phrase-final lengthening. Given that the size of an Accentual Phrase is similar to a word (Kim, 2004), it is likely that Korean listeners would relate the high pitch cue to a word-final position even without phrase-final lengthening. However, in both Dutch and Korean, phrase-final lengthening still can serve as a useful cue to mark the phrase-final position (and at the same time the word-final position) as both languages have substantial phrase-final lengthening in the Intonational Phrase-final position (Gussenhoven, 2004; Jun, 2000).

Given these cross-linguistic differences and similarities, it is hypothesized that language-specificity will affect lexical segmentation differently. When the two groups of listeners are exposed to the physically same linguistic stimuli, their lexical segmentation strategies will be different in using pitch cues, but similar in using durational cues. In order to test the hypothesis, an artificial language with six trisyllabic words was created. The words were concatenated to make a 10 min speech stream without any pause between them. Five prosodic conditions were created: *No Prosody* (the baseline

condition), *Initial Pitch* (high pitch word-initially), *Final Pitch* (high pitch word-finally), *Final Duration* (lengthened word-finally), *Final Pitch&Duration* (high pitch & lengthened word-finally). Listeners were exposed to one of the five conditions, and it was then tested whether they were able to extract (i.e., remember) words that they heard in the learning phase.

Results showed that Korean listeners performed better with final high pitch alone (*Final Pitch* condition) than in *No Prosody* condition, while Dutch listeners showed no better performance with pitch cue alone (either with high pitch in initial or in final positions—i.e., *Initial Pitch* or *Final Pitch* conditions). However, both Dutch and Korean listeners performed better with final lengthening (*Final Duration* condition) and with both final lengthening and final high pitch (*Final Pitch&Duration* condition) than in the baseline (*No Prosody*) condition. These results suggest that listeners generally use native prosodic cues in segmenting a novel language, but that partial presence of acoustic correlates of prosodic structure may not be necessarily helpful to the listeners in lexical segmentation (e.g., no better performance by Dutch listeners when only pitch cues were available).

The study further tested whether listeners can learn a non-native prosodic pattern better when they are exposed to the input again and whether they can generalize a non-native prosodic feature to novel segmental strings. Listeners who participated in the first session came back after three days for the second session. Half of the listeners heard the *same* stimuli that they had been exposed to in the first session, and the other half heard a new artificial language which had *different* words, but with the same prosodic conditions. The results showed that Dutch listeners' performance improved with the final high pitch cue (*Final-Pitch* condition), an effect which was not observed in the first session. There was no difference between the *same* and the *different* word conditions. This suggests that a non-native prosodic cue (e.g., final high pitch alone), which is initially difficult to learn, may be learned via repeated exposure and it can be generalized independently from segmental string (i.e., no difference between the same and different word conditions). Note, however, that the final high pitch cue alone is not a non-existing cue in Dutch, but it is generally accompanied by final lengthening. On the other hand, Korean listeners' performance did not improve with initial high pitch (*Initial-Pitch* condition). Given that initial high pitch is not a possible pitch cue in Korean, this result indicates that a non-native prosodic pattern is not easy to learn via passive, repeated exposure, especially when the cue is in direct contradiction with the native language's prosodic system.

In sum, this study shows that listeners use prosodic patterns of their native language when they segment words from a novel artificial language. They cannot learn a non-native prosodic pattern via a simple exposure when the pattern does not exist in their native language. When the pattern does exist in their native language as a phonetic correlate of prosodic characteristics, however, repeated exposure can help them learn and generalize the pattern.

Topicalization and Hierarchical Information Structure in Japanese

Hideki Kishimoto

Japanese is a language where topics are morphologically marked. Topics are signaled by the particle *-wa* attached to a nominal, and the structural position of *wa*-marked topics may vary; even though the most typical position where it appears is the left periphery of a clause (i.e. to the left of a subject), it can appear in a clause-internal position as well (Kuno 1973, Heycock 2008).

- (1) a. *Kooen-de-wa Kodomo-ga ason-de i-ru.*
park-in-TOP child-NOM play-PTCP be-PRES
'In the park, the children are playing.'
b. *Kodomoga kooen-de-wa ason-de i-ru.*
child-NOM park-in-TOP play-PTCP be-PRES
'In the park, the children are playing.'

The existence of the multiple options for topic positions leads to the issue of how topics are licensed. One might argue that Japanese has a TP-internal structural position licensing topics in *vP* in addition to CP, both of which are assumed to constitute phrases (Chomsky 2001, 2002, 2004), or even that there is not any syntactic relevance for licensing topics (Tomioka 2006).

The major aim of this paper is to present empirical evidence that topics are licensed, by getting placed in CP regardless of their surface position. More specifically, this paper shows that in Japanese, *wa*-marked topic phrases are placed in the CP domain, either in overt constituent structure or in LF, whereas ordinary phrases—including major subjects that are sometimes assumed to reside in the same clause-peripheral position as topics, behaving like adjuncts syntactically—are located within TP throughout the derivation.

In this paper, making crucial use of the focusing particle *dake* 'only' positioned at the right of tense, it is argued that regardless of its surface position, a *wa*-marked topic is placed in CP by the LF output. Crucial evidence for this claim can be adduced by looking at the focus interpretations associated with examples like (2).

- (2) a. *Tori-wa tob-u-dake da.*
bird-TOP fly-PRES-only COP
'The birds only fly.'
b. *Tori-ga tob-u-dake da.*
bird-NOM fly-PRES-only COP
'Only the birds fly.'

The interpretations that can be assigned to these two sentences differ significantly; in (2a), the interpretation in which *dake* is associated with the subject—i.e., the interpretation that the birds are the only entities that fly—is not available, but in (2b), this interpretation is possible. Note that *dake* is compatible with a topic phrase, as indicated in (3), and (3) can have the interpretation that is not possible for (2a).

- (3) *Tori-dake-wa tob-u.*
bird-only-TOP fly-PRES
'Only the birds fly.'

The important point is that the focus particle *dake* attached to tense extends its focus domain over TP, so the data regarding *dake*-focusing in (2) show that the *wa*-marked

topic phrase—in opposition to an ordinary *ga*-marked subject—should be located in the CP domain. Topics can appear clause-internal position as well, and since the same focus facts obtain for a clause-internal topic, we propose that when a *wa*-marked topic appears in clause-internal position, it undergoes LF movement, with the result that it ends up in CP, where we claim topics are licensed.

Further empirical evidence in support of the view that a topic can only be licensed in CP may be adduced from examples like (4).

- (4) a. *[*Mary-wa kat-ta*] *hon-ga koko-ni ar-u.*
 Mary-TOP buy-PAST book-NOM here be-PRES
 ‘The book [that bought Mary] is here.’
- b. *John-ga [Mary-wa hon-o yon-da to] it-ta.*
 John-NOM Mary-TOP book-ACC read-PAST that say-PAST
 ‘John said that Mary read the book.’

Clause-internal topics cannot appear in certain syntactic contexts including relative and conditional clauses, as well as some temporal-adjunct clauses. Clause-internal topics are allowed in root contexts, where clause-initial topics can be interpreted non-contrastively (Emonds 1976, Hooper and Thompson 1973, Heycock 2008), as well as in certain non-root contexts (i.e. in certain adjunct and noun complement clauses), where the topics are always interpreted contrastively. We show that the difference in acceptability between (4a) and (4b) is reduced to the question of whether or not LF topic movement violates island conditions. The fact that certain clause-internal topics exhibit island effects provides crucial empirical evidence that they undergo LF operator movement.

Moreover, we argue that the syntactic contexts which allow the occurrence of topic phrases can be defined by what type of clause projection is available. This claim implies that the structural organization of subordinate clauses should vary depending on their clause type, namely, certain types of subordinate clauses, but not others, comprise projections which are necessary to have topic phrases. This is in fact the case, and in Japanese, the difference in clause type can be checked by looking at whether or not the clause allows for some modal expressions, which appear to the right of tense (see Minami 1974, 1993).

- (5) a. *[*Mary-ga kat-ta daroo*] *hon-ga koko-ni ar-u.*
 Mary-NOM buy-PRES will book-NOM here be-PRES
 ‘The book [that Mary would have bought] is here.’
- b. *John-ga [Mary-ga hon-o yom-mu daroo to] it-ta.*
 John-NOM Mary-NOM book-ACC read-PRES will that say-PAST
 ‘John said that Mary read the book.’

Crucially, when the CP projection licensing a *wa*-marked topic is not projected in a clause, a modal expression like *daroo* ‘will’ is not permitted to appear there (cf. Yuasa 2005). In the light of this fact, it is argued that the legitimate occurrence of topics within certain syntactic islands comes from the availability of the land site within them.

In Japanese, a topic can appear either in clause-initial or clause-internal position on the surface. This gives the impression that a topic may well be licensed clause-internally, possibly, in vP. On the contrary, this paper shows that even if a topic appears clause-internally, it must be licensed in CP by way of undergoing invisible LF movement. One important consequence derived from the discussion is that the locus where a topic phrase is formally licensed is confined to CP, despite the fact that a topic is allowed to occur clause-internally, as well as clause-initially.

Phonology meets Syntax in the Bosnian declensional system

Nicola Lampitelli - Université Paris 7

(*nicolalampitelli@gmail.com*)

The realizational process which associates form to morphemes, i.e. Vocabulary Insertion, is a central issue in piece-based morphological theories (Halle & Marantz 1993, Marantz 2001, Embick & Halle 2005). In these models, a morpheme is a features matrix associated to a given terminal node. Hence, Vocabulary Items (VI) compete for insertion at node level (Embick & Marantz 2008). This paper argues that only one VI corresponds to each features matrix, and therefore the surface exceptions are the result of either phonological processes (Lowenstamm 2008) or contextual local allomorphy rules (Embick 2010). Both processes apply post-syntactically.

The Bosnian¹ declensional system (1) provides interesting evidence to this proposal. As the correlation between gender and declension seems predictable (Corbett & Browne 2008:337-343), I consider that gender is overtly marked on nouns and that it coincides with declension.² Note that: (i) the suffixes on nouns are formed by one vowel;³ (ii) only M sg. NOM displays a phonological *zero*-morpheme. The underlying form of a Bosnian noun is shown in (2) (cf. Halle & Vaux 1998 and Halle & Nevins 2009 for similar structures).

Given (2), then M sg. NOM must be marked by three *zero*-morphemes, i.e. gender/declension, number (#) and case (K), respectively. This is shown in (3). Then consider the theory of Elements (Kaye et al. 1985). For a five-vowel language like Bosnian, this gives the results in (4). Table (5) shows the decomposed case endings.

Let us consider NOM first. By hypothesis, NOM has no overt morpheme; thus what we observe in (5.a) is the combination of gender and # morphemes only. In (6), I recast the data including both NEU(ter) endings: *-o* and *-e* (cf. fn 6).

The analysis proceeds as follows: I_{pl} marks pl., as it appears in M and F pl. only, whereas sg. is marked by *zero*, as by hypothesis in (3). The Elements **A** in one side and **I** and **U** in the other, mark F and NEU, respectively. Again, (3) tells us that M is marked by *zero*. The situation is clear for M and F, but NEU needs more explications. First, notice that the surface difference between [o] and [e] is given by **I** vs. **U**. Secondly, note that NEU is characterized by NOM-ACC syncretism (cf. 1), which -I claim- is formally explained by the presence of the Element A in both NOM and ACC. This brings us to show all the underlying morphemes, as in (7). Each terminal has only one Vocabulary Item associated to, e.g. $pl. \leftrightarrow I_{pl}$, $ACC \leftrightarrow A$ or $DAT/LOC \leftrightarrow U$, etc.⁴

I propose the structure in (8.a) and the corresponding complex head at PF (8.b) in order to account for each noun in (1) (Th is inserted as by a general requirement of Bosnian). At PF, each terminal can be associated to a CV syllable (in the sense of Lowenstamm 1996, 2008): in this model, only the phonological material associated to the CVCV.. cluster surfaces.

Mismatches between phonology and syntax can however occur, cf. double-framed cases in (8). White-framed cases are explained by the theory of Elements itself (no possible /U+I/ combinations in five-vowel languages), whereas dark and mild-dark grey ones are instances of contextual allomorphy rules which apply locally (cf. Embick 2010). Only light grey-framed cases need special readjustment rules. Neither Fusion nor Fission must be postulated.⁵

¹ My informant comes from Bosnia-Herzegovina and for this reason I refer to Bosnian-Serbo-Croatian as to simply Bosnian.

² A fourth small group exists, cf. *stvar* 'thing', where all the nouns are F, but the declension is different from group 1. Note that group 1 only contains M nouns whereas group 3 only NEU ones. Group 2 has some M nouns: cf. *jedan sudjia* 'one.M judge' vs. *jedna kuća* 'one.F house'.

³ Whenever a consonant is present (pl. DAT and INSTR), the suffix is: /Vm(a)/, where V stands for the alternating vowel. I am aware that some F nouns can have a INSTR -ju *stvarju* 'with a thing', but these belong to the marginal -i declension (cf. fn 2) which is nevertheless possibly accounted for by my approach by positing a contextual allomorphy phenomenon.

⁴ Note that NEU examples in 8 have I_{pl} , as by hypothesis. 6.c-d are incomplete representations of the structures.

⁵ Note that GEN forms seem to be "impostors" like in Russian, cf. Bailyn & Nevins (2008).

In this approach, phonological representations are more abstract (cf. Lowenstamm 2008) and the notion of “paradigm” becomes useless, as well-formedness is locally determined (cf. Bobaljik 2008) and class is not a feature of stems (cf. Halle & Marantz 2008).

(1)		group 1 (M)		group 2 (F)		group 3 (NEU)	
		sg.	pl.	sg.	pl.	sg.	pl.
a. NOM		<i>okvir</i>	<i>okvir-i</i>	<i>kuć-a</i>	<i>kuć-e</i>	<i>sel-o</i> ⁶	<i>sel-a</i>
b. GEN		<i>okvir-a</i>	<i>okvir-a</i>	<i>kuć-e</i>	<i>kuć-a</i>	<i>sel-a</i>	<i>sel-a</i>
c. DAT-LOC		<i>okvir-u</i>	<i>okvir-ima</i>	<i>kuć-i</i>	<i>kuć-ama</i>	<i>sel-u</i>	<i>sel-ima</i>
d. ACC		<i>okvir-(a)</i> ⁷	<i>okvir-(e)</i>	<i>kuć-u</i>	<i>kuć-e</i>	<i>sel-o</i>	<i>sel-a</i>
f. INSTR		<i>okvir-om</i>	<i>okvir-ima</i>	<i>kuć-om</i>	<i>kuć-ama</i>	<i>sel-om</i>	<i>sel-ima</i>
		‘frame’	‘frames’	‘house’	‘houses’	‘village’	‘villages’

(2) *Underlying structure of a noun*: Root + gender/declension + # + K

(3) *Null Morphemes*: a. M = zero; b. sg. = zero; c. NOM = zero.

(4) *Decomposed vowels*: a. [a] = /A/; b. [i] = /I/; c. [u] = /U/; d. [e] = /A.I/; e. [o] = /A.U/

(5) *Decomposed vocalic case endings*

	M sg.	M pl.	F sg.	F pl.	NEU sg.	NEU pl.
a. NOM	<i>zero</i>	I	A	A.I	A.U	A
b. GEN	A	A	A.I	A	A	A
c. DAT/LOC	U	I(ma)	I	A(ma)	U	I(ma)
d. ACC	(A)	A.I	U	A.I	A.U	A
f. INSTR	A.U(m)	I(ma)	A.U	A(ma)	A.U(m)	I(ma)

(6) *Decomposed NOM endings*

a. Masculine	b. Feminine	c. Neuter I	d. Neuter II
sg. pl.	sg. pl.	sg. pl.	sg. pl.
<i>zero</i> I _{pl}	A A I _{pl}	A. I A	A. U A

(7) *Underlying morphological structures for final vowels: gender/declension.#.K*

	M sg.	M pl.	F sg.	F pl.	NEU sg.	NEU pl.
a. NOM	∅.∅.∅	∅.Ipl.∅	A .∅.∅	A .Ipl.∅	U .∅.A	U .Ipl.A
b. GEN	∅.∅.A	∅.Ipl.A	A .∅.A	A .Ipl.A	U .∅.A	U .Ipl.A
c. DAT/LOC	∅.∅.U	∅.Ipl.U	A .∅.U	A .Ipl.U	U .∅.U	U .Ipl.U
d. ACC	∅.∅.A	∅.Ipl.A	A .∅.A	A .Ipl.A	U .∅.A	U .Ipl.A
f. INSTR	∅.∅.[A.U]	∅.Ipl.[A.U]	A .∅.[A.U]	A .Ipl.[A.U]	U .∅.[A.U]	U .Ipl.[A.U]

(8) *Structure for a noun*

a. [K [num [n √] _{nP}] _{#P}] _{KP}	b. κ[# _{Th} [n[√ n] _{Th}] _#] _K
CVCV..	CVCV.. CV

⁶ NEU nouns can be marked in sg. direct cases (NOM & ACC) by [e], too i.e. *srce* ‘heart’. The theory proposed here accounts for both endings in NEU, as 6 below shows. The crucial issue is that a unique underlying Element A marks both ACC and NOM in the NEU paradigm as it is the spell-out for the ACC case. This accounts for the NOM-ACC syncretism.

⁷ M nouns are marked by -a in sg. ACC when the referent is animate. On the other hand, Pl. ACC is always -e.

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Bare Phrase Coordination

Bradley Larson(bradl@umd.edu)

U. of Maryland

Aim: This talk unifies theories of coordination (Goodall, 1987; Munn, 1993) with minimalist theories of adjunction (Chametzky, 2000; Pietroski, 2005; Hornstein 2008). Coordination will be shown to derived via a label-less Merge operation of the same type that applies in adjunction. Contrasting with traditional adjunction, this new coordination qua adjunction is able to introduce arguments and verbs into the derivation. This has the upshot of enhancing the syntactic event structure to be able to handle the distributive/collective split (Smith 1969; Lakoff and Peters, 1969 among many others) and reduplicative verb conjunction (Cusic, 1981; Lasersohn, 1995). This conception of coordination also makes the correct syntactic predictions concerning adjunction and binding (Pesetsky, 1995; Nakao, 2007), the so-called ‘invisibility’ of the second conjunct (deVries, 2005), and (among others) crosslinguistic instances of Conjunct Sensitive Agreement (Aoun, et. al. 1994; Bošković, 2009). Finally, this account provides a syntactic foundation for the apparent finite-state character of iterative phrases in sense of Uriagereka (2008) and the thesis that the language faculty can sometimes invoke finite-state processes in structure building and interpretation (Chomsky, 1961, 1963; Raimy and Idsardi, 1997).

Background: Coordination has long played an interesting role in theories of language: simultaneously serving as difficult empirical explanandum and integral conceptual fulcrum. On one hand, it has properties that are problematic such as plural agreement with singular DPs, ‘flat’ interpretations of binary-branching, hierarchical structure, and optional deletion of all but the final conjunct. On the other, it has been crucially used to arbitrate between human language being context-sensitive or context-free (Chomsky, 1957; Gazdar, 1981), determine the extent of lexicalism (Lasnik, 1999), and examine the nature of syntactic islands (Merchant, 2001). This talk will be representative of both aspects of coordination: Problematic empirical facts of coordination will be investigated directly while addressing the larger conceptual issue of the role that different levels of the Chomsky hierarchy play in natural language.

Previous Analyses: Munn (1993) analyzes coordination as adjunction in traditional, X²-theoretic terms, like in [1]. Hornstein (2008) shows that X²-theoretic adjunction is untenable under Bare Phrase Structure (Chomsky, 1995) and proposes instead a process of adjunction by which adjuncts are concatenated, but not labeled [2]. The concatenated adjuncts can optionally be labeled and be acted upon en masse as a constituent [3]. Hornstein does not extend this analysis to coordination; this is the task of this talk.

New Analysis: Coordination and adjunction share many similar properties: they can both apply iteratively, they have little effect on selection, they are optional, etc. These surface level facts can be accommodated by Hornstein bare phrase adjunction applied to conjuncts [4]. The fact that adjuncts can optionally be labeled and targeted to the exclusion of the un-labeled ones carries over to coordination [5]. In addition to these facts, the optional labeling also predicts the optional grouping of arguments in distributive/collective ambiguities [6]: un-labeled conjuncts receive a distributed reading while labeled ones receive a collective reading. Reduplicative verb conjunction mirrors adjunction in its interpretation as ‘plural’ activities [7]: following from a neo-Davidsonian view of verb valency and events, multiple verbs in parallel entail multiple events. Nakao (2007), following Pesetsky (1995) notes that while an argument within a complement can bind an argument in an adjunct, the same does not hold true the other

way around [8] even though under traditional adjunction, the complement PP (in this case) should be c-commanded by the adjunct PP. The same holds true for coordination, the second conjunct (the adjunct) cannot c-command into the first (the complement) [9] (From Munn, 1993). It is also noted by Nakao and Pesetsky that if a complement PP is adjoined to the right, the judgments switch [10] and the same is true for further adjunction to the right in coordination [11]. deVries (2005) presents a number of arguments concerning the ‘invisibility’ of the second conjunct. One presented here shows the Coordinate Structure Constraint not applying symmetrically [12], arguments from the first conjunct can extract, but not from the second, which one would expect if the second conjunct is adjoined and not fully integrated in the structure. This analysis is extended to examples like in [13] from Bošković (2009) where the verb agrees with the nearest conjunct. Adjuncts are classically added to the edge of the tree, and the fact that the outer conjuncts in question do not show agreement follows from coordination as adjunction. **Looking down the hierarchy:** As Uriagereka (2008) points out, although Chomsky (1957) shows that a finite state grammar is not sufficient to characterize natural language, he does not argue that natural language does not *ever* utilize finite-state processes. Uriagereka analyzes iterative phrases (similar to those in [7] as involving such a process. Example [14] is argued to be derived by a finite-state mechanism like [15] in the lexicon. The adjunction procedure presented here provides a means for the products of that finite-state process to enter into syntactic derivation.

[1] [NP[NPJohn] [BPand [NPMary]]] [2] [VP eat^the cake]^ [PPin the yard]^ [PPwith a fork]

[3] [VP[VP eat the cake] in the yard] John did t_{VP}^ [PPwith a fork]

[4] [VP greet [NP John]]^ [NPMary]^ [NPBill]

[5] [John [VPwent to school]]^ [VPread a book] while Mary [VPdid so]^ [VPTalked to a girl]

[6]a. [NPJohn]^ [NPMary] earned \$10 *versus* b. [NP[NPJohn]^ [NPMary]] earned \$10

[7] [John [VPran(e)]]^ [VPran(e)]^ [VPran(e)] to loose weight

[8]a. John talked [to these people_i] [about themselves_i].

b. *John talked [to themselves_i] [about these people_i]

[9]a. The candidates saw a video of them_i and each other_i making speeches

b. *The candidates saw a video of each other_i and them_i making speeches

[10]a. (?)John talked t_{PP} [about the men_i] [PP to themselves_i].

b. *I talked t_{PP} [about themselves_i] [PP to [John and Bill]_i].

[11]a. The candidates saw a video of Bush, (and) each other_i, and them_i making speeches

b. *The candidates saw a video of Bush, (and) them_i, and each other_i making speeches

[12]a. [How much] can you drink [[t] and [still stay sober]]?

b. *[What] did Joop [[finally overcome his inhibitions] and ask Jaap [t]]?

[13]a. Juce su uništena sva sela i sve varošice

yesterday are destroyed_{PL,N} all villages_N and all towns_F

‘All villages and all towns were destroyed yesterday.’

b. Sva sela i sve varošice su uništene

all villages_N and all towns_F are destroyed_{PL,F}

[14] Y el lobo sopló casas, sopló casas hasta que se murió

and the wolf blew houses, blew houses until that self died

‘and the wolf blew houses, blew houses, until he died’

[15] {1} → {2} → {3} → ...

↑ blew houses

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Island Effects and Multiple *Wh*-movement

Shiti Malhotra

University of Maryland, College Park

This paper investigates the differential acceptability of island violations in sentences containing single and multiple *wh*-phrases, and studies the impact of multiple *wh*-words on the acceptability of island violations in Hindi/Urdu (H/U). Preliminary judgment data using a 7-point rating scale show that H/U speakers (n=16) robustly reject island violations (relative to equally complex non-island violation controls) regardless of whether or not the violation is in a single (1a) or multiple-*wh* construction (1b). Statistical analyses revealed no significant differences in the ratings given to single versus multiple-*wh* with respect to across both adjunct and *wh*-islands violations. On its face, these findings challenge Richards (2001) *Principle of Minimal compliance* (PMC) which claims that once a licit movement observes a constraint (like subjacency) it obviates the need for subsequent movements to the same head be constrained by that condition.

(1) a. *ram jaanta-hai (ki) [agar mira-ne **kya** kharida]

Ram knows Comp [if Mira-Erg what bought]

“What does Ram know whether Mira bought?”

b. *ram-ne **kis-ko** pucha (ki) [agar mira-ne **kya** kharida]

Ram-Erg Who-Acc asked comp [if Mira-Erg what bought]

“Who did Ram ask whether Mira bought what?”

Evidence supporting Richard’s proposal comes from cases like *wh*-island effects in Japanese (also reported in Watanabe, 1992) where a *wh*-extraction ill-formed in isolation (2 a) is remedied by the addition of another *wh*-word outside the island (2 b).¹ Assuming that there is a single attractor responsible for the movement of both *wh*-phrases, Richards claims that once the matrix +*wh* comp obeys subjacency by attracting a *wh*-phrase which is not in an island, the system ignores subjacency violations that same matrix +*wh* comp. The findings reported in this paper however suggest that movement of the higher *wh*-phrase, which is outside an island, doesn’t free the movement of the other *wh*-phrase, which is inside an island in H/U.

¹ Half of the Japanese speakers I checked with agreed with these judgments.

(2) a. ??John-wa [Mary-ga **nani-o** katta ka dokka] sirigatte-iru no?

John-Top [Mary-Nom what-Acc bought whether] know -want Q

“What does John know whether Mary bought?”

b. John-wa **dare-ni** [Mary-ga **nani-o** katta ka dokka] tazuneta no?

John-Top who-Acc [Mary-Nom what-Acc bought whether] ask Q

“ Who did John ask whether Mary bought what?”

There are two possible explanations for the results, (i) *PMC* doesn't hold universally; or (ii) The nature of *wh*-movement is different in H/U. Option (i) can't be true because *PMC* otherwise operates in H/U. For instance, H/U like Japanese (Boeckx and Sugisaki, 2000) doesn't allow long-distance scrambling of adjuncts (3a) but allows arguments to be freely long-distance scrambled (3b). However if an argument also undergoes long-distance scrambling, scrambling of an adjunct is allowed (3c), even though it observes the same condition it does in (3a). In terms of *PMC* that would mean that the scrambling of the argument makes the scrambling of adverb free.

(3) a* **jaldi-se_i**, [John-ne socha [ki Mary-ne darwaza t_i khola]]

quickly [John-Erg thought [that Mary-Erg door opened]]

“Quickly, John thought that Mary opened the door.”

b. **darwaza_j**, [John-ne socha [ki Mary-ne t_j jaldi-se khola]]

door [John-Erg thought [that Mary-Erg quickly opened]]

“That door, John thought that Mary opened quickly.”

c. **darwaza_j jaldi-se_i**, [John-ne socha [ki Mary-ne t_j t_i khola]]

door quickly [John-Erg thought [that Mary-Erg opened]]

“That door, quickly, John thought that Mary opened.”

This paper thus explores option (ii) and suggests that the difference between Japanese and H/U lies in the way multiple *wh*-movement works in these languages. H/U involves *wh*-movements to different heads, where only the higher *wh*-element gets attracted by the C head, all the other *wh*-phrases moving to a different position, [spec, vP], see (4). This is unlike Japanese, where all *wh*-phrases move to the same C head (5).

- (4) [_{CP} **kaun**_j [_{IP} t_j [_{vP} **kis-se**_i khush hai [kynuki mira t_i pyaar karti-hai]]]
- (5) [_{CP} **dare-ni**_j [_{CP} **nani-o**_i [_{IP} john-wa t_j [Mary-ga t_i katta ka dooka] tazuneta no?

Evidence in support of the claim that *vP* edge hosts scope-taking elements in H/U comes from constructions with *wh* scope-markers (6) (Malhotra and Chandra, 2007) and long-distance agreement (7) (Bhatt, 2005). Assuming that *vP*-specifier is a scope determining site in H/U, it is this *vP* that acts as a landing site for the subsequent *wh*-phrases in multiple questions.

- (6) raam-ne [mira-ko **kyaa** bataya [ki [**kaun** aaye-gaa]]

Ram-Erg [Mira-Acc what told [Comp who come-will]]

“Who did Ram tell Mira will come?”

- (7) a. naim-ne [har kitaab paRhn-ii] chaah-ii

Naim-Erg [every book-fem. read-fem.] want-fem.

“Naim wanted to read every book” (every book > want; want > every book)

- b. naim-ne [har kitaab paRhn-aa] chaah-aa

Naim-Erg [every book-fem. read-default.] want-default

“Naim wanted to read every book.” (want > every book; every book > want)

How do we know that the second *wh*-phrase moves to *v* and not *C*? *Wh* scope-marking constructions in H/U show intervention effects (8a), when an intervener (“siita-ko-hi”) in the matrix clause blocks the movement of the *wh*-phrase (“kya”) from the embedded clause to matrix *C*. These effects however disappear when a *wh*-phrase (“kis-ne”) is added outside the domain of the intervener (8b), suggesting that the second *wh*-phrase never moves across the intervener (in matrix *vP*). Contra this, intervention effects in Japanese don’t disappear with the addition of a *wh*-phrase outside the domain of the intervener, “akira-ni-dake” (9), suggesting that second *wh*-phrase in Japanese crosses the intervener on its way to the *C* domain.²

² Interestingly, the Japanese speakers who don’t find any difference in the acceptability of single and *Wh*-phrases in terms of intervention effects are the ones who find difference in acceptability in island violations.

(8) a **raam-ne* [_{VP} ***siita-ko-hi kya*** bataya [ki mira-ne ***kya*** kharida]]

Ram-Erg [Sita-Dat-only what told [Comp Mira-Erg what bought]]

“What did Ram tell only Sita that Mira bought?”

b *kis-ne* [***siita-ko-hi kya*** bataya [ki mira-ne ***kya*** kharida]]

Who-Erg [Sita-Dat-only what told [Comp Mira-Erg what bought]]

“Who told only Sita that Mira bought what?”

(9) a**maki-wa* [_{VP} ***akira-ni-dake*** [jun-ga ***nani-o*** katta to] it-ta no

Maki-Top [Akira-Dat-Only [Jun-Nom what-Acc bought that] told Q

“What did Maki tell only Akira that Jun bought?”

b* *dare-ga* [***akira-ni-dake*** [jun-ga ***nani-o*** katta to] it-ta no

Who-Nom [Akira-Dat-only Jun-Nom what-Acc bought that] told Q

“Who told only Akira that Jun bought what?”

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Phasal Recursion of FocP : Evidence from Malayalam

Rosmin Mathew, CASTL, Tromsø

1. Background

The term recursion is used in generative linguistics literature to denote various phenomena (Tomalin 2007). At least one of the contexts in which the term is used is in arguments about the nature of projections associated with the notion of Phases in the sense of Chomsky (2001 et seq), to argue that some projections like Focus appear recursively in every Phase (see Horvath 2007 for an alternative approach). Thus, in lines with the articulated left periphery proposed by Rizzi (1997) for the CP domain, an articulated periphery had been proposed to the vP domain as well (see for eg Jayaseelan 2001, Poletto 2009). Belletti (2004) also argued for a FocPhrase above the vP which encodes new information. Though this proposal has been claimed to be useful in analyzing Focus/Wh constructions in various languages (cf. Collins and Essizewa (2007) for Kabiye, Aboh (2007) for Kwa languages, Sinopoulou (2008) for Greek), it has not gone unchallenged (for eg. Brunetti (2002) for Italian).

2. Introduction

Malayalam is a SOV Nom-Acc Dravidian language spoken in South India. The language does not exhibit any subject-verb agreement and is conventionally described as a Wh *in situ* language. However, certain peculiarities of Malayalam with respect to the interrogative constructions along with other factors led Jayaseelan (2001) to propose a Focus Phrase immediately above vP in the language. He cited the mandatory movement of question words to an immediately preverbal position in interrogative constructions in an otherwise SOV language:

- | | |
|---|--|
| <p>1. ninne a:ru adiccu?
 you-ACC who beat-PST
 Who beat you?</p> <p>2. *a:ru ninne adiccu?</p> | <p>Note that contrary to expectations, this canonical SOV order in 2 is ungrammatical as a content question. It can only have an echo reading.</p> |
|---|--|

However, a close examination of Malayalam shows that the nature of Focus in the preverbal focus constructions differ markedly from the more prolific focus constructions in the language, namely, clefts.

3. Problematisation

A cleft in Malayalam is given in (3)

3. Mary-e a:nu John kand-a-Du¹
 Mary-ACC FM John saw-a-SG.NEUT = It is Mary that John saw (FM : Focus Marker)

Results of tests pertaining to exhaustivity (e.g 4,5) and distributional restrictions (6,7) (cf. Szabolci 1981) shows that cleft constructions in Malayalam encode Exhaustive Identification.

Exhaustivity: This test involves a minimal pair where the first sentence has a co-ordinated phrase at the focus and the second sentence has only one of the co-ordinated phrase at the focus. ‘If the second sentence is not among the logical consequences of the first one, then the focus expresses exhaustive identification’. 5 is not a logical consequence of 4.

- | | |
|--|--|
| <p>4. john-um Bill-um a:nu Mary-e kand-a-Du
 john-conj bill-conj FM mary-ACC saw-a-SG.NEUT
 It is John and Bill who saw Mary</p> | <p>5. john a:nu Mary-e kand-a-Du
 john FM mary- ACC saw-a-SG.NEUT
 It is John who saw Mary</p> |
|--|--|

Distributional restrictions: E. Kiss shows that the position of Identificational focus is not available for universal quantifiers, ‘also’-phrase, ‘even’-phrases etc., a prediction borne out in Malayalam clefts.

- | | |
|--|--|
| <p>6. *patti-yum a:nu pu:cca-ye pidicc-a-Du
 dog-conj FM cat- ACC caught-a-SG.NEUT
 It is the dog also who caught the cat.</p> | <p>7. *patti po:lum a:nu pu:cca-ye pidicc-a-Du
 dog even FM cat- ACC caught-a-SG.NEUT
 It is even the dog that caught (a) cat.</p> |
|--|--|

1 This SG.NEUT is the default marking on all cleft constructions and is never taken as a reflex of subject-verb agreement by linguists or grammarians though other Agree based proposals do exist.

It can be seen straightforwardly that these results are in accordance with E. Kiss (1998) who argues that syntactic as well as semantic distinctions exist between Identificational and Information Focus. She explains that while Information focus conveys non-presupposed information, Identificational Focus expresses exhaustive identification and syntactically acts as an operator, moving into a scope position and binding a variable. This distinction is evident in Malayalam in constructions that involve the cleft focus marker *a:nu* versus constructions that involves preverbal Focus position in that we get none of the exhaustivity related results in the non cleft sentences that use the preverbal Focus position. The movement of an element to a scopal position thereby creating an operator-variable pair in cleft sentences is evidenced by the retention of case-morphology (e.g 3) as well as restrictions on what can be moved to the cleft focus (eg. 6,7). More over, all these tests fail to produce positive results in the preverbal focus position:

7. Mary-ye **JOHN-UM BILL-UM** kandu 8. Mary-ye **John** kandu
 Mary-ACC John-conj Bill-conj saw Mary-ACC John saw
 JOHN AND BILL saw Mary John saw Mary

8 follows logically from 7.

9. Mary-e JOHN PO:LUM kandu

Mary- ACC John even saw = Even John saw Mary ; no distributional restrictions.

That is, the preverbal focus position cannot be invoked for clefts if we are to account for the facts related to clefts.

4. Analysis

The paper argues that the lower preverbal Focus position that Jayaseelan (2001) proposes is an instantiation of Information Focus as can be seen from answering strategies. It is proposed that the cleft construction do not involve the preverbal focus position as Jayaseelan argues, but rather involves a higher scope position in the C-level that is crucial in creating an operator-variable pair produced by movement of the clefted element as would be expected in Identificational Focus constructions. This is evidenced by the scope relations obtained in cleft constructions (eg 10-13).

10. ella: channel-um Obama-ye a:nu ka:nicc-a-Du
 all channel-conj Obama-ACC FM show-PST-A-SG.NEUT

It is Obama whom all the channels showed.

Meaning, there were others like Palin and McCain present; but ONLY Obama was shown by the channels.

11. Obama-ye a:nu ella: channel-um ka:nicc-a-Du
 Obama-ACC FM all channel-conj show-PST-A-SG.NEUT.

Meaning, Palin and McCain were shown by some channels; but Obama was the person shown by ALL chanel.

Thus, the element at the cleft focus interacts with quantifiers. This does not happen with the elements in the preverbal focus position as would be expected if it is not a C-level scope position; 12 and 13 present no scope interaction.

12. ella: channel-um Obama-ye ka:niccu 13. Obama-ye ella: channel-um ka:niccu
 all channel-conj Obama-ACC show-PST All channels showed Obama

This analysis has the additional advantage of explaining some puzzling facts in Malayalam like the proliferation of clefting in content questions and constituent negation: the focus marker *a:nu* manifests in the higher left periphery of the language which provides a scope position for scope-taking elements to move into.

5. Summary and Conclusion

This paper looks into Malayalam where both Identificational Focus and Information Focus are manifested overtly at different locations. Jayaseelan (2001) has proposed that there is a Focus position immediately above vP (and below IP) in Malayalam to which Wh phrases move. It is shown here that this preverbal lower Focus position encodes Information Focus while Identificational Focus mandatorily requires a higher C-level position provided by clefts in the language, thus manifesting different types of Focus in different phases, namely, vP and CP. It thus proves to be not just a mere phasal recursion of the same Focus.

Updating alternatives: focus on bound pronouns — Clemens Mayr – Harvard University

Overview A theory is developed how to deal with focused bound pronouns while still treating them as plain bound variables. Two steps are needed: First, focus operators are inserted locally, in the scope of the quantifier. Second, it is required that focus must add new alternatives.

The problem Jacobson (2000) and Sauerland (2000, 2008) observe that bound pronouns can bear optional stress (1a)-(1b) – that is, contrastive stress in (1a).

- (1) a. Every student cut his (own) arm, and every TEACHER cut HIS arm
b. Every student cut his (own) arm, and every TEACHER cut his arm

Two questions arise w.r.t. (1). First, if both the stressed pronoun (1a) and the unstressed one (1b) are to be treated as bound variables, it is difficult to see how the pronoun in conjunct 1 would contrast with the one in conjunct 2 in (1a) but not in (1b). Since (1b) is grammatical, a principle like AvoidF (Schwarzschild 1999) that strives to minimize the number of foci would dictate that (1b) should be preferred over (1a). Second if we assume that bound pronouns have individual-denoting expressions as their alternatives, the focus value of conjunct 2 in (1a) would be (2).

- (2) $\llbracket C2 \rrbracket^f = \{p : \exists P_{\langle et \rangle}. \exists y_{\langle e \rangle} [p = \forall x [P(x) \rightarrow \text{cut}(x, y\text{'s arm})]]\}$

Simplifying greatly, for Rooth (1992) focus is licensed if both the ordinary value of the antecedent constituent and of the utterance are members of the focus alternatives and these furthermore contrast. But neither the ordinary value of conjunct 1 nor the one of conjunct 2 is a member of the set in (2). Focus should not be licensed. A parallel problem obtains in Schwarzschild's 1999 theory.

New observation Sauerland (2000, 2008) (also cf. Jacobson (2000)) argues that (1a) and (1b) differ in that the bound pronoun in the former is a bound E-type pronoun (3) but not in the latter. The function in the pronoun is treated as a presupposition. The function attracts the focus.

- (3) a. every student $\lambda_1[t_1$ cut the₁ student's arm]
b. every teacher_F $\lambda_1[t_1$ cut the₁ teacher_F's arm]

The focus value for (3b) is (4). Now both the value of conjunct 1 and conjunct 2 are members of the alternatives in (4) and they also contrast. Focus on the pronoun should be licensed. Moreover, (1b) cannot block (1a), because the plain variable version does not compete with the E-type one.

- (4) $\llbracket (3b) \rrbracket^f = \text{defined iff } \forall x, f(x) = 1, \text{ if defined } \{p : \exists P. \exists f_{\langle et \rangle} [p = \forall x [P(x) \rightarrow \text{cut}(x, x\text{'s arm})]]\}$

We find a problem for this view in cases where the restrictor of the quantifier and the function in the pronoun do not co-vary. Focus on the bound pronoun is also possible with additive *too*:

- (5) Every director discussed his film, and every PRODUCER discussed HIS film, too

Following (Heim 1992:189) (also cf. Geurts and van der Sandt (2004)) we assume the anaphoric entry for *too* in (6). It focus-associates with $\llbracket X \rrbracket$ and presupposes that there is an alternative to $\llbracket X \rrbracket$ different from it such that the predicate used is true of that alternative.

- (6) $\phi(\llbracket X_F \rrbracket) \llbracket \text{too}_i \rrbracket = \text{defined iff } \exists y_i \in \llbracket X \rrbracket^f \text{ and } \phi(y_i) = 1, \text{ if defined } \phi(\llbracket X_F \rrbracket)$

With the LFs in (7) where *too* focus-associates with the restrictor of the quantifier, (7b) presupposes that every director discussed his film and every director is a producer. (7a) does not guarantee this.

- (7) a. every director₅ $\lambda_1[t_1$ discussed [the₁ director]'s film]
b. every producer_F $\lambda_1[t_1$ discussed [the₁ producer]_F's film] too_5

We cannot amend this by stipulating that *too* associates with both instances of *producer* in (7b). *too* does not associate with more than one focus. As (8) shows it cannot have the meaning in (8a) where exactly this would be required.

- (8) John₆ kissed Mary₈, and BILL_F kissed SUE_F, $\text{too}_{6,8}$
a. *'John kissed Mary, and in addition Bill kissed Sue.'
b. ?'John kissed Mary, and Bill kissed Mary and in addition Sue.'

1. Local focus operators We propose that (at least) focus operators associating with bound pronouns must be inserted locally – that is, in the scope of the quantifier binding them. We follow Rooth (1992) in assuming that the \sim -operator interprets focus. \sim takes a contextually determined set C as an argument and presupposes that $g(C)$ is a subset of the focus value of \sim 's sister.

(9) $\llbracket \sim X \rrbracket = \text{defined iff } g(C) \subseteq \llbracket X \rrbracket^f, \text{ if defined } \llbracket X \rrbracket$

Conjunct 2 in (1a) has the LF in (10). We require that the λ -abstractor is below the \sim -operator, i.e., inside the alternatives. The semantics for (10a) is then as in (11). We assume that presuppositions project universally from the scope of the quantifier (Heim 1983). The first presupposition requires that for each teacher x the set of alternatives $g(C)$ contains predicates of the form $x \text{ cut } a\text{'s arm}, a$ an individual. $g(D)$ is of the form *every x of some particular property cut x 's own arm*.

(10) a. $\sim D [\text{every teacher}_F][\sim C[\lambda_1[t_1 \text{ cut } 1_F\text{'s arm}]]]$
 b. $\llbracket (10a) \rrbracket = \text{defined iff } \forall x[\text{teacher}(x) \rightarrow g(C) \subseteq \{\lambda x.\text{cut}(x, y\text{'s arm}) \mid y \in D_e\}], \text{ and}$
 $g(D) \subseteq \{\forall x[Q(x) \rightarrow \text{cut}(x, x\text{'s arm}) \mid Q],$
 if defined $\forall x[\text{teacher}(x) \rightarrow \text{cut}(x, x\text{'s arm})]$

2. Updating alternatives But why is the focus on the bound pronoun licensed? I propose the focus-requirement in (11). Each sentence has \sim appended to the top. Further \sim s are optional.

(11) A proposition p denoted by sentence ϕ can be added to C , iff there is a q denoted by an antecedent ψ such that $q \subseteq \llbracket \phi \rrbracket^f$ and $q \neq \llbracket \phi \rrbracket$.

Moreover, focus on a given constituent embedded in ϕ is licensed iff the $g(C)$ that a given focus operator in ϕ makes use of is not unaffected by updating the context c with $\llbracket \phi \rrbracket$:

(12) Focus in ϕ is licensed iff $g(C_c) \neq g(C_{c+\llbracket \phi \rrbracket})$.

In other words, each sentence must have at least one focus to conform to (11). Second, a focus can only be used when new alternatives are added to $g(C)$. For (1a) this means that the two foci are licensed if the following obtains: First, conjunct 2 must add new alternatives of the form $\lambda x.\text{cut}(x, a\text{'s arm})$ to $g(C)$, a an individual. The meaning of conjunct 1 provides such alternatives with a being some student, as it entails that $\text{cut}(a, a\text{'s arm})$. Conjunct 2 adds *distinct* alternatives with a being a teacher. (12) is satisfied. Second, there must be alternatives of the form $\forall x[Q(x) \rightarrow \text{cut}(x, x\text{'s arm})]$, Q some property. Clearly, conjunct 1 provides such an alternative. Conjunct 2 adds a *distinct* one. (12) is again satisfied. The latter also applies to (1b). The theory allows optionality between (1a) and (1b). It would not allow dropping the focus on the restrictor, however. The top \sim would not interpret a focus then. (11) also accounts for the obligatoriness of focus observed by Schwarzschild (1999). The theories differ, however, wrt. which foci are not licensed. Schwarzschild's theory rules out (1a). The present theory does not. The present theory also accounts for unfocusability in Schwarzschild's cases, though, because there $g(C)$ would not be affected by the utterance. (12) also explains the observation made by (Sauerland 2000:175) that the restrictors used must differ in order for bound pronouns to be focused. Only in (13b), but not in (13a) is the $g(C)$ used by \sim attached to the VP affected by uttering the sentence.

(13) *Discourse*: I didn't expect every teacher to get what she wanted.

- a. #But, every teacher GOT what SHE wanted.
- b. In the end, every GIRL got what SHE wanted.

Child-Specific Patterns of Positional Neutralization: Articulatory vs Perceptual Influences
Author: Tara McAllister

There is a wealth of evidence that in adult grammars, processes of phonemic neutralization apply preferentially in contexts that are perceptually and/or prosodically weak, while contrast tends to be preserved in strong contexts. Surprisingly, this positional bias appears not to hold in early stages of phonological development. A number of common processes of typical phonological development tend to neutralize contrast in word-initial or pretonic contexts while preserving contrast in final or posttonic positions. A well-documented example is positional velar fronting (Chiat, 1983; Bills & Golston, 2002; Inkelas & Rose, 2003, 2008), illustrated in (1)-(2) below. Numerous other child processes can be seen to apply preferentially in strong positions, and it is claimed that such processes are sufficiently widespread that a predisposition to neutralize contrast in strong contexts can be regarded as a general property of child phonologies (Dinnsen & Farris-Trimble, 2008).

- (1) Velars are fronted to coronal place in word-initial/pretonic position:
 - a. [dat], “got”
 - b. [bidas], “because”
- (2) Velars do not undergo fronting in word-final/posttonic position:
 - a. [dak], “duck”
 - b. [dago], “tiger”

Modeling the child phenomenon of neutralization in strong position is problematic under any of the approaches used to account for adult processes of positional neutralization (e.g. Beckman, 1997; Smith, 2000, 2002; Steriade, 1999, 2001). If we extend these systems to accommodate child patterns, we predict that a grammar favoring the preservation of contrast in weak over strong positions should be attested in adult phonological typology, yet no such grammar has been described. Attempts to account for strong neutralization in child phonology have taken two directions. One approach, adopting a perceptual definition of the strong/weak distinction, posits that children have distinct perceptual sensitivities that cause them to differ from adults in their identification of perceptually prominent contexts (Dinnsen & Farris-Trimble, 2008). An alternative is that neutralization in strong position reflects child-specific limitations on articulation rather than perception. In this case, differences in the force or magnitude of articulatory gestures across strong and weak prosodic contexts are responsible for asymmetric patterns of neutralization. I explored both perceptual and articulatory factors in a longitudinal study of one child with positional velar fronting. The results, reviewed below, were consistent with an articulatory account.

Dinnsen & Farris-Trimble (2008) have posited that in early stages of phonological development, non-initial contexts are favored as having greater prominence than initial contexts. This preference is reversed over the course of lexical and phonological development. The notion that infants and children seem to pay particular attention to the ends of words has a longstanding research precedent (Slobin, 1973; Echols & Newport, 1992; Aslin, Woodward, LaMendola, & Bever, 1996). For present purposes, I will abstract away from the details of Dinnsen & Farris-Trimble’s analysis. Instead, I will present the results of an empirical test of their perceptual model with one four-year-old boy, B, who exhibited multiple patterns of neutralization in strong position in production. A longitudinal investigation of one process of strong neutralization in B’s production is discussed below. At several intervals, B was engaged in a nonword discrimination task featuring pairs of phonetically controlled nonwords in a carrier phrase context (“I can say ___”). Stimulus pairs could be identical or differ by a single sound in word-initial position (e.g. *tuv*—*kuv*) or word-final position (e.g. *vud*—*vug*), and B indicated whether the nonwords he heard were the same or different. Results were analyzed using logistic regression; the dependent variable was

accuracy in detecting phonemic contrast, while independent variables included initial versus final position of the target contrast, along with several phonetic factors such as voicing. Position in the syllable was found to be a significant predictor of discrimination accuracy using the likelihood ratio test on the residual deviance statistic ($p = .002$). The direction of the contrast was the reverse of that predicted by Dinnsen & Farris-Trimble's perceptual model: B discriminated contrasts in word-initial position with significantly greater accuracy than word-final contrasts. Thus, even as he neutralized contrast in strong position in production, B conformed to the adult positional bias in perception. This suggests that child patterns of neutralization in strong position cannot be attributed to a child-specific pattern of perception.

Instead, I propose that neutralization in strong position reflects the phonologization of articulatory-phonetic limitations that are present in developing but not skilled speakers. Specifically, I will review evidence that children have a limited ability to produce discrete lingual gestures, instead favoring ballistic movements in which the tongue rides passively on the jaw (Kent, 1992). I propose that this articulatory preference is encoded phonologically as a constraint MOVE-AS-UNIT: "Achieve linguopalatal contact by moving the tongue-jaw complex." The ballistic movements that satisfy MOVE-AS-UNIT also predispose the child speaker to produce undifferentiated gestures, which feature broad lingual contact spanning much of the surface of the palate (Gibbon, 1999). Whenever the coronal region of closure is last to be released—the sequence argued to be favored by a jaw-dominated pattern of movement—the undifferentiated gesture will be perceived to have coronal place, creating the percept of fronting in the case of a velar target. The positional nature of the neutralization reflects the use of more forceful gestures in prosodically strong positions, where an elevated level of intraoral pressure must be offset by strong contact between tongue and palate. I propose to capture this difference by scaling the magnitude of the MOVE-AS-UNIT violation to the height of the articulatory target, such that more forceful gestures incur a greater violation. To avoid incurring this violation, children are more likely to use undifferentiated (fronted) production in the prosodically strong context.

The proposal that the magnitude of the MOVE-AS-UNIT violation is determined by the force of articulatory contact gives rise to other predictions for fronting patterns. In particular, since voiceless consonants are produced with greater force than their voiceless counterparts (Wakumoto, Masaki, Honda & Ohue, 1998), we could also expect the incidence of fronting to be lower for voiced relative to voiceless velars. This prediction was tested in a longitudinal study of B's patterns of velar fronting in production, using a transcribed record of 1,696 velar-containing target words collected from both spontaneous and elicited productions over a period of around six months. Linear regression was used to determine which prosodic and/or segmental factors played a significant role in conditioning the accuracy of B's velar productions. Consistent with expectation based on previous studies, prosodic context was found to be a significant predictor of velar production accuracy ($p < .000$), and velar production accuracy was significantly greater in prosodically weak relative to strong contexts. In keeping with the articulatory force hypothesis laid out above, voicing was also a significant predictor of velar production accuracy ($p < .000$), such that voiced velar targets were produced with greater accuracy than their voiceless counterparts. I will demonstrate that the constraint MOVE-AS-UNIT, which is sensitive to differences in gestural force, allows for a unified model of B's pattern of velar production across a full range of prosodic and segmental contexts. Finally, I propose that further applications will be found for child-specific constraints that reflect the immature speaker's limited ability to produce discrete articulatory gestures. The greater difficulty that children experience in contexts that require the most forceful gestures, notably prosodically strong positions, provides an explanation for their otherwise puzzling preference to reverse the positional bias that holds strongly across adult grammars.

Grafts and beyond
Katy McKinney-Bock and Jean-Roger Vergnaud
University of Southern California

Multidominance, the sharing of constituents by two separate maximal Phrase-markers, has been argued to provide an adequate representation of the chains associated with particular cases of displacement (e.g., relative clause extraposition, right node raising, ATB *wh*-movement, headless relative clause formation). In a series of seminal papers, van Riemsdijk has put multidominance on a secure theoretical footing by showing that it naturally arises as a subcase of Merge, called *grafting*, when the most general formulation of Merge is assumed (see in particular van Riemsdijk 2001, 2006). In the same papers, van Riemsdijk has extended the empirical scope of multidominance, subsuming under it a host of new structures. The proposal in van Riemsdijk 2001, 2006 constitutes a significant advance. Yet, it does not provide a complete account of the structures analyzed. Consider one such structure, that which van Riemsdijk has dubbed “the transparent free relative.” An example is the sentence *I ate what was euphemistically referred to as a steak* (Van Riemsdijk 2006, his (9a)). In that structure, [*a steak*] is both in the CP context [*I ate —*] and in the CP context [*something was euphemistically referred to as —*]. The notion of a shared constituent, like grafting and parallel merge (Citko 2005), is by its very nature symmetrical: the two separate CPs described as sharing the constituent [*a steak*] are on a par. Then, the asymmetry in the construction between the matrix and the relative clause remains unaccounted for.

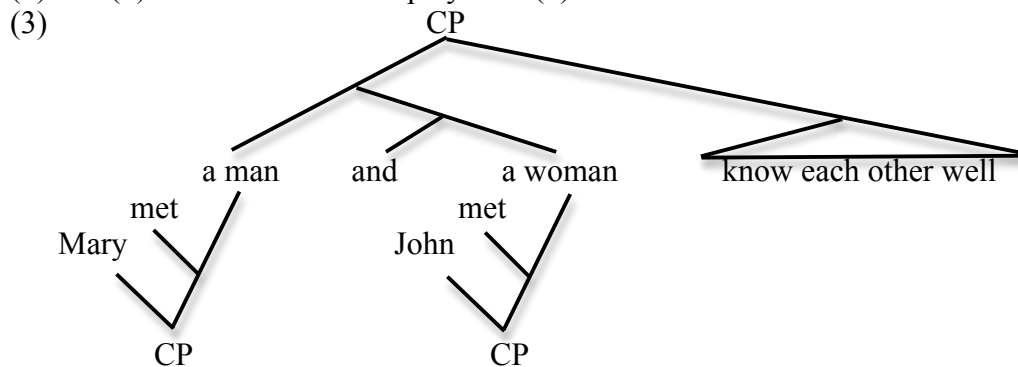
Proposal: We adopt van Riemsdijk’s notion of grafting, defined as a symmetric relation between independent CP phases. The asymmetry within the associated surface structure is derived from that between the nominal and verbal phrases (between D and C at their upmost level), using the notion of asymmetric grammatical connective (Vergnaud 2008). To illustrate, looking towards relative clauses with split antecedents, there is difficulty in representing relative clauses that bind reciprocal anaphors (cf. Perlmutter & Ross 1970, Wilder 1994):

(1) Mary met *a man* and John met *a woman* who know *each other* well.

A solution to the problem of split-antecedent relatives lies in an observation by Wilder 1994 that the structure in (1) has a similar interpretation as its counterpart in (2), which reverses the relativized and matrix clauses:

(2) *A man* who Mary met and *a woman* who John met know *each other* well.

While Wilder dismisses the possibility that (1) and (2) are structurally derived from the same source, we argue to the contrary that these two structures are indeed from the same source: three independent root CPs linked by grafting. Treating [*a man*] and [*a woman*] as calluses and coordinating the two CPs [*Mary met a man*] and [*John met a woman*] allows for both (1) and (2). The structure is displayed in (3):



Following Vergnaud 2008, the CP phase is analyzed as the pairing $\{Dx, Cy\}$ of a nominal and a verbal structure, linked together by the asymmetric binary connective (*D, C*). This

grammatical connective defines a chain of two occurrences of some constituent ∂ across Dx and Cy , defined as “ x is in the context of D , y , in the context of C , and ∂ , in both contexts.” In (3), the shared constituent ∂ is the coordination [*a man and a woman*]. The resulting asymmetry is characterized as follows. If the CP containing *each other* is in the context of C , then it is the matrix clause; if it is in the context of D , it relativizes. Complementarily, the coordinated CPs are relativized across-the-board, or are matrix clauses across-the-board. Then, (1) (resp. (2)) obtains if the coordinated CP clauses are in the context of C (resp. D) and the non-coordinated CP *know each other well* is in the complementary context of D (resp. C). Clearly, the interaction between the logical connective *and* and the grammatical one (D , C) is critical. In fact, there is evidence that the pair of sentences (1)-(2) are not completely ‘reversible,’ so to speak:

(4) A man that went to the store and a woman that Mary met know each other well.

(5) *A man went to the store and Mary met a woman who know each other well.

The position of the connective *and* with respect to C or D defines which type of constituent is coordinated. When the coordination is in the context of C , there is coordination of CPs; when it is in the context of D , there is coordination of relative clauses. Essentially, different relativizations (subject vs. object) in (4) are acceptable because, in a grafting structure, an occurrence of *and* in the context of D or C only requires parallelism of the coordinated structures in the higher (matrix) CP context (cf. McKinney-Bock and Vergnaud 2009).

The account of split-antecedent relatives above is more general. We argue that both headed relative clauses and correlative constructions without coordination are naturally unified with split-antecedent headed relatives under a grafting analysis. We take the relative clause structure, with covert wh-copying, and the correlative structure, with overt wh-copying, to be two realizations of the same underlying abstract structure.

One issue with any multidominance structure is that of Spell-Out and where the shared constituent ∂ is linearized at PF. With a symmetric structure, a stipulation has to be made as to where the constituents are pronounced. The asymmetric structure proposed here has a natural asymmetry from the (D , C) chain that accounts for constituent ordering between a relativized and matrix clause. In the case of the split antecedent relative, coordination adds an additional dimension of linearization, and the higher scope of *and* with the (D , C) connective predicts that the CP (resp. DP) subsuming the coordinated DPs (resp. CPs) (the constituent containing *each other*) will always be linearized after the coordinated constituents. This is observed in (1)-(2).

A second issue is that of interpretation at LF, in particular that of the interaction of quantifiers across the CPs containing a shared constituent. Citko 2005 observes asymmetric quantification across parallel structures (*Every man and his wife attended the colloquium*/**His wife and every man attended the colloquium*), and there is further asymmetry in the cases containing relative clauses with entailment of quantifiers and licensing of NPIs/binding of pronouns:

(6) No man who bought any pies ate them. (7) No man who bought a pie ate any pie.

(8) Every man who left loves himself (9) Every man who loves himself left

Following Vergnaud 2008, we argue that the asymmetric (D , C) connective behaves like a two-place logical conditional. We see this in cases like:

(10) John eats what(ever) Mary eats *Mary eats $x \rightarrow$ John eats x*

which are parallel to the interpretation of certain correlatives in Chinese. The restrictive role played by the relative clause is the same type of restrictive role created by the antecedent of a conditional. Then, quantification interacts with the asymmetric (D , C) connective, resulting in the asymmetric interpretation of quantification in relative and matrix clauses.

To conclude, the combination of grafting with asymmetrical grammatical connectives allows for a unified formal analysis into independent clauses at the level of the CP phase.

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Edge Features on Moving Elements: Evidence from Sideward Movement

Jairo Nunes (jmnunes@usp.br) (Universidade de São Paulo)

Bošković (2007) argues that the computational system can be substantially simplified if the edge features (uF) that trigger successive cyclic movement are hosted by the moving elements and not by heads of phases, as in Chomsky (2001). More specifically, he proposes the following typology: (i) in multiple *wh*-fronting languages like Bulgarian, all *wh*-elements have uF; (ii) in obligatorily *wh*-in situ languages such as Korean, *wh*-elements have no uF; and (iii) in *wh*-movement languages such as English, which allow *wh*-in situ in multiple questions, *wh*-elements are lexically specified as being optionally associated with uF. This paper focuses on Bošković's characterization in (iii). Adopting the general lines of his approach, I argue that (iii) in fact describes languages like Portuguese, where *wh*-movement to the matrix [Spec,CP] is optional (cf. (1)). Our starting point is the contrast in (2) in European and Brazilian Portuguese (*EP/BP*). When a *wh*-object remains *in situ*, adjunct control into nonfinite clauses patterns like English, yielding subject control (cf. (2a)). Interestingly, when *wh*-movement takes place (cf. (2b)), adjuncts may exhibit subject or object control. In addition, finite adjuncts are also sensitive to A'-movement in the matrix domain in BP (Modesto 2000, Rodrigues 2004), but not in EP (cf. (3)). These puzzling facts can be accounted for if adjunct control is derived via sideward movement (Hornstein 2001, Nunes 2001) and if that *wh*-elements in Portuguese are lexically specified as optionally having uF. Importantly, the presence of uF has consequences for computations regarding Merge-over-Move. According to Hornstein (2001), subject control is enforced in adjunct control structures due to Merge being more economical than Move. In the derivation of (4a), *who* cannot undergo sideward movement from the embedded subject position (cf. (4b)) to the matrix object position, for merger of *Mary* in this position is more economical. After *Mary* is merged, *who* can only move to the matrix [Spec, vP] (cf. (4c)), yielding subject control. In contrast, the relevance of Merge-over-Move in Portuguese depends on whether or not a *wh*-element has an edge feature. If it doesn't, the derivation proceeds as in (4) and subject control is enforced. On the other hand, if the embedded *wh*-subject has uF, it must move if possible, i.e., uF renders Merge-over-Move inapplicable. Furthermore, this edge feature must be checked in the appropriate site. Hence, (2a) is unacceptable under the object control reading not because sideward movement of the *wh*-element to the matrix object position violates Merge-over-Move, but because uF remained unchecked (cf. (5a)). When it is checked by moving to [Spec,CP] (cf. (5b)), the derivation converges, yielding object control. (The subject control reading of (2b) results from merging the *wh*-phrase in the matrix object position and moving *o João* from the adjunct clause to the matrix [Spec, vP]; cf. (6)). The difference between EP and BP with respect to finite adjuncts (cf. (3)) then reduces to the independent fact that referential null subjects in finite clauses pattern like controlled PRO in BP, but like *pro* in EP (Ferreira 2000, Rodrigues 2004). Independent evidence for this proposal is provided by the contrast in (7). Null possessors behave like *pro* in EP, but like controlled PRO in BP (Floripi 2003, Rodrigues 2004). Thus, a null possessor within an adjunct in EP is insensitive to *wh*-movement, whereas in BP an *in situ wh*-object triggers subject control but a moved *wh*-object licenses both subject and object control. As for languages like English, I propose that they allow assignment of uF in the course of the derivation, as in Chomsky's system, but to the *wh*-element, as in Bošković's proposal. Crucially, assignment of uF is subject to Last Resort. Thus, assignment of an edge feature to *who* in (4b) is prevented by Last Resort, for *who* already sits in an edge position; Merge-over-Move is then enforced and we get subject control. Put differently, in languages like English assignment of an edge feature to a *wh*-element is only licensed when the *wh*-phrase sits in an inaccessible position with respect to Chomsky's (2004) PIC. This is typically the case of objects. Thus, if a *wh*-object is assigned uF and moves to the edge of vP (cf. (8)), uF

neutralizes Merge-over-Move and may license sideward movement to the matrix object position. Still, sideward movement yields a convergent result only if uF is appropriately checked. This derives the fact that a parasitic gap can be licensed by a moved *wh*-phrase, but not an *in situ* one (cf. (9)). To sum up, constructions such as the ones mentioned here provide compelling support not only for sideward movement and for Bošković's (2007) proposal, but also for Hornstein's (2001) movement theory of control, for it is the movement properties of *wh*-elements that ultimately determine what kind of control obtains in adjunct structures.

(1) O que (é que) ele disse que ela comprou?/Ele disse que ela comprou o quê? (EP/BP)
what is that he said that she bought /he said that she bought what
 'What did he say that she bought?'

(2)a. A Maria_i cumprimentou **quem**_k depois de **ec**_{i/*k} entrar na sala? (EP/BP)
the Maria greeted who after of enter in-the room
 'Who did Maria greet after entering the room?'

b. **Quem**_k (é que) a Maria_i cumprimentou **t**_k depois de **ec**_{i/k} entrar na sala? (EP/BP)
who is that the Maria greeted after of enter in-the room
 'Who_k did Maria_i greet after she_i/**he**_k entered the room?'

(3)a. **O João**_i sempre cumprimenta **quem**_k quando **ec** entra na sala?
the João always greets who when enters in-the room

EP: ec = i/k/w **BP: ec = i/*k/*w**

b. **Quem**_k (é que) o João_i sempre cumprimenta **t**_k quando **ec** entra na sala?
who is that the João always greets when enters in-the room

EP: ec = i/k/w **BP: ec = i/k/*w**

(4)a. Who_i greeted Mary_k after **ec**_{i/*k} entering the room

b. Numeration: {Mary₁, ...} K = [_{VP} who entering the room] L= greeted

c. [_{TP} who_i [_{VP} [_{VP} t_i [greeted Mary]]] [after t_i entering the room]]]

(5) a. *O João [[cumprimentou [**quem**_{uF}]_i] [depois de t_i entrar na sala]
the João greeted who after of enter_{INF} in-the room

b. [**quem**_{√F}]_i é que o João [[cumprimentou t_i] [depois de t_i entrar na sala]
who is that the João greeted after of enter_{INF} in-the room

(6) [**quem**_{√F}]_i é que o João_k [t_k [cumprimentou t_i] [depois de t_k entrar na sala]
who is that the João greeted after of enter_{INF} in-the room

'Who_i did João greet after he_i entered the room?'

(7) a. A Maria_i esbofeteou quem_k por causa do irmão **ec**?
the Maria slapped who by cause of-the brother

'Who did Maria slap because of his/her brother (EP) / her/*his brother (BP).'

b. **Quem**_k é que a Maria_i esbofeteou t_k por causa do irmão **ec**?
who is that the Maria slapped by cause of-the brother

'Who did Maria slap because of his/her brother?' (EP/BP)

(8)a. [_{VP} my v [reading [which paper] first]]] → [_{VP} my v [reading [**which paper**]_{uF} first]]]

b. [[**which paper**]_{uF} [_{V'} my v [reading t first]]]

(9)a. [[**which paper**]_{√F} [did you [_{VP} t [_{VP} v [file t]]] [without [t [my reading t first]]]]]]]

b. *[who T [_{VP} [_{VP} t v [filed [**which paper**]_{uF}] [PP without [t [my reading t first]]]]]]]

Decomposing Path

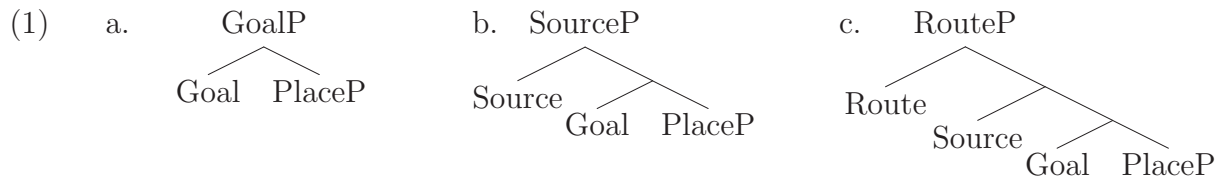
Marina Pantcheva, CASTL, University of Tromsø

Background: An established view in the literature on directional expressions is that syntactically they are decomposed into a PathP which dominates a PlaceP (Koopman 2000, van Riemsdijk and Huybregts 2002, den Dikken to appear, Svenonius to appear). Under this view, the Place head encodes Location, while the Path head hosts directional elements, no matter whether they express a Goal, a Source or a Route path.

Aim of the talk: In this talk, I argue for a decomposition of the Path head. Based on cross-linguistic evidence showing that different types of paths are of different morphological complexity and, crucially, subject to a subset-superset relation, I suggest a more detailed structure, comprising four heads. Further, I explore the lexicalization of the structure and test the predictions against the empirical domain of syncretisms. I show that the decomposed Path structure and the lexicalization theory I adopt give us a key to understanding the cross-linguistic patterns of syncretisms involving Route, Source, Goal and Location.

Decomposing Path: A typological study of 92 genealogically diverse languages performed by the author revealed a striking asymmetry: there are six languages in the sample where the Source expressions are morphologically built on top of Goal expressions by the addition of a dedicated morpheme, while the converse is unattested. For instance, the Mansi (Ugric) Allative marker is *-n*, while the Ablative marker is *-n-əl* (Keresztes 1998). Similarly, there are three languages in the sample where the Route marker morphologically contains the Source marker, while no language has a Goal or Source marker containing a Route marker. For example, in Avar (Daghestanian) the Perlocative case ending is formed by adding the suffix *-n* to the Ablative case suffix *-(ss)a* (Charachidzé 1981, Blake 1994).

Taking morphological complexity to be indicative of syntactic complexity, I propose that the syntactic structure for Source paths embeds Goal paths, (1b). Similarly, the syntactic structure for Route paths embeds Source paths, (1c).



Concerning the semantic contribution of the heads in (1), I suggest that the Place projection encodes a spatial domain (in Zwarts' 2005, 2008 terms). The semantics of the Goal head is that of transition. Thus, the structure [Goal PlaceP] represents a transition to the location encoded by PlaceP, and this is interpreted as a Goal path (visualized by Zwarts as $---++++$). Building on the observation that Source paths are “reversed” Goal paths, I suggest that the Source head is the locus of a reversal (or negation) operation which reverses the orientation provided by the [Goal PlaceP] configuration thus leading to a Source path of the shape $+++---$. Finally, the Route head is another transitional head, which leads to the first (positive) phase of the Source path below it, thus giving rise to a Route path, represented as $---++++---$. This proposal captures the following facts: (i) Goal and Source paths are monotransitional (Zwarts 2008, Fong 1997); (ii) Route paths have two transitions and the location encoded by PlaceP (indicated by plusses) holds of some intermediate portion of the path (Zwarts 2008); (iii) Source paths involve negation of Goals (Arsenjević 2006, Svenonius 2009).

Lexicalization: Given that in many languages the Goal, Source and Route markers are monomorphemic, we need a lexicalization theory which allows for a single morpheme to spell out more than one terminal. I adopt the Nanosyntactic view on lexicalization, according to which a vocabulary item can spell out an entire stretch of syntactic structure

(Caha 2009, Svenonius et al. 2009). This approach to spell-out and the decomposed Path structure allow us to capture the diversity of directional expressions across languages, while also accounting for the restrictions which apply to them. For example, a Source structure involving three heads can be spelled out in only four ways, a prediction confirmed by the languages in the sample. I have chosen for an illustration languages that employ cases to express spatial relations, therefore the morphemes in (2) will be suffixed on the noun in the opposite order, i.e., *Ayacučo-man-da* ‘from Ayacucho’ (Quechua).

- | | | | | | | | | | | | | | | | | | |
|--------------------|---|--|--------|------|-------|--------------------|-------------------|--------------------|-------------------|--------------------|--|------------------|--|-------------------|-------------------|--|--|
| (2) | <ul style="list-style-type: none"> a. Hua, Oceanic (Kibrik 2002) b. Quechua, Andic (Jake 1885) c. Uzbek, Turkic (Boeschoten 1998) d. Kham, Bodic (Watters 2003) | <table style="border: none; margin: auto;"> <tr> <td style="text-align: center; padding: 0 5px;">Source</td> <td style="text-align: center; padding: 0 5px;">Goal</td> <td style="text-align: center; padding: 0 5px;">Place</td> </tr> <tr> <td style="text-align: center; padding: 0 5px;">$\underbrace{ri'}$</td> <td style="text-align: center; padding: 0 5px;">\underbrace{ga}</td> <td style="text-align: center; padding: 0 5px;">$\underbrace{ro'}$</td> </tr> <tr> <td style="text-align: center; padding: 0 5px;">\underbrace{da}</td> <td colspan="2" style="text-align: center; padding: 0 5px;">\underbrace{man}</td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 0 5px;">\underbrace{n}</td> <td style="text-align: center; padding: 0 5px;">$\underbrace{Dá}$</td> </tr> <tr> <td colspan="3" style="text-align: center; padding: 0 5px;">\underbrace{ni}</td> </tr> </table> | Source | Goal | Place | $\underbrace{ri'}$ | \underbrace{ga} | $\underbrace{ro'}$ | \underbrace{da} | \underbrace{man} | | \underbrace{n} | | $\underbrace{Dá}$ | \underbrace{ni} | | |
| Source | Goal | Place | | | | | | | | | | | | | | | |
| $\underbrace{ri'}$ | \underbrace{ga} | $\underbrace{ro'}$ | | | | | | | | | | | | | | | |
| \underbrace{da} | \underbrace{man} | | | | | | | | | | | | | | | | |
| \underbrace{n} | | $\underbrace{Dá}$ | | | | | | | | | | | | | | | |
| \underbrace{ni} | | | | | | | | | | | | | | | | | |

Syncretisms: A lexical item can also lexicalize a subset of the full syntactic structure it is specified for. This is called *The Superset Principle* (Starke 2007, Caha 2009) and is restricted by the following conditions: (i) the lowest head in the syntactic structure is lexicalized by the lowest feature of the lexical item, and (ii) there is no other matching item with fewer “superfluous” features. For illustration, take a language which lacks a locative marker with the feature <Place>, but has a Source marker α :<Source, Goal, Place> and a Goal marker β :<Goal, Place>. Both α and β are eligible to spell out a locative structure, as the syntactic structure they are specified for is a superset of the locative structure. The item β wins the competition, since it has fewer superfluous features (Goal) compared to α (Goal and Source). Thus, in this language the Goal marker will be syncretic with Location.

The Superset principle thus derives as a theorem that syncretism targets adjacent heads and prohibits syncretisms of the type A-B-A, where two heads are syncretic across a third one (cf. Bobaljik’s (2007) *A-B-A generalization). Thus, a whole class of syncretisms is predicted to be unattested, e.g., syncretisms involving Route syncretic with Goal to the exclusion of Source, or Source syncretic with Location to the exclusion of Goal — a syncretism claimed to be indeed non-existent in Andrews (1985:97). The typological investigation performed by the author confirms this prediction: no language exhibits an A-B-A pattern of syncretism. In fact, the only two types of syncretism found in the sample are Route=Source (14 languages) and Goal=Location (23 languages). However, four more syncretism are predicted to be possible, as they involve adjacent heads.

- | | |
|-----|--|
| (3) | <ul style="list-style-type: none"> <li style="width: 50%;">a. Route=Source=Goal=Location <li style="width: 50%;">c. Source=Goal=Location <li style="width: 50%;">b. Route=Source=Goal <li style="width: 50%;">d. Source=Goal |
|-----|--|

Interestingly, all syncretisms in (3) involve a lexical item that is ambiguous between Source and Goal, no matter whether it also expresses Route and/or Location. Recall that Source paths are construed as a reversed (or negated) Goal path. Hence, a language with a Source=Goal syncretism will have a spatial marker that expresses a certain meaning and its negation. I suggest that it is unacceptable to have such a “contradictory” lexical item from a pragmatic point of view.

Conclusion: I argue that different types of Paths have different syntactic structures: (i) Routes embed Sources, (ii) Sources embed Goals, (iii) Goals embed Locations. This proposal captures the morphological make-up and diversity of Path expressions across languages. Combined with the *Superset*-driven lexicalization, it explains the non-existence of a the A-B-A type of syncretisms. In addition, the “negation” semantics of the Source head provides an insight why languages with a Source=Goal syncretism are unattested.

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Experimental Evidence for the Syntax of Phrasal Comparatives in Polish

Roumyana Pancheva and Barbara Tomaszewicz, USC

Comparatives are of two types, depending on whether *than* is followed by a clause (*than she is*) or by a DP ('remnant') that is case-dependent on *than* (*than her*). Following convention, we call the former 'clausal' (CC) and the latter 'phrasal' comparatives (PC). The syntax of PCs remains controversial. We offer evidence from three acceptability-rating studies in Polish, supporting the view that *than* has an elided small clause complement in PCs.

1. The Reduction (RA), Direct (DA), and Small Clause (SCA) Analyses of PCs

1.1 The RA holds that PCs and CCs differ only in the size of ellipsis in the *than*-clause and in the mechanism of case-marking the remnant ([2], [15], [16], [7]). Typically, ellipsis of TP is implicated, as in (1). Case on the remnant comes from e.g., ECM by *than* across a CP boundary ([17]). As in CCs, a *wh*-operator (null in English) moves to Spec, CP of the *than*-clause, creating a degree predicate, which *more* takes as an argument.

(1) He visited more cities than [_{CP} *wh*₂ she₃ [_{TP} ~~*x*₃ visited *d*₂ many cities~~]]

1.2 Under the DA *than* has a DP complement ([8], [14]). The DA captures the fact that syntactically, the remnant behaves as part of the matrix. Yet, *more* cannot have the same meaning in PCs and CCs, because in PCs it combines with an individual – the denotation of the *than*-PP, while in CCs it has a degree predicate argument – the *than*-CP ([9], [14], [1]).

1.3 The SCA posits that *than* has a small clause complement, whose subject it ECMs (e.g., [19], (2)). There is *wh*-movement in the *than* clause, as in CCs, but there is no C to attract the *wh*-operator. The movement is purely for the creation of a degree predicate, as in [10]. In the absence of a *wh*-probe, the *wh*-operator moves to the edge of the predicate, here a *vP*. The small clause predicate is obligatorily elided under identity with the matrix. The SCA captures the syntactic behavior of the *than* PP as well as the DA does, while preserving the lexical semantic parsimony of the RA. It relies on the same *more*, as in both PCs and CCs the *than*-clause denotes a predicate of degrees, created by *wh*-movement.

(2) He visited more cities than [_{PredP} she₃ [_{vP} ~~*wh*₂ [_{vP} *x*₃ visit *d*₂ many cities~~]]]

2. Distinguishing between the Three Theories: the *More*-NP as a Subject

The SCA predicts that when the *more*-NP originates in Spec, *vP*, PCs will be degraded. Consider the two ways to derive *More tourists visited London than Paris* as a PC in (3) (in actuality, the English sentence must be a CC, given that neither (3a) nor (3b) is acceptable).

(3) a. * ... than [_{PredP} Paris₃ [_{vP} ~~*wh* many tourists₂ [_{vP} *x*₂ visit *x*₃]]]]
b. ??/* ... than [_{PredP} Paris₃ [_{vP} ~~*wh*₂ [_{vP} *d*₂ many tourists visit *x*₃]]]]]~~~~

Movement of the subject out of Spec, *vP* targeting *vP*, as in (3a), is precluded in Bare Phrase Structure (BPS [3]) as too local. Movement of X is defined as the ordered set $\langle \{X, A\}, \{X, B\} \rangle$ where B and A are X's sisters before and after movement. The chain created by the movement of a subject *wh*-phrase to *vP* is $\langle \{wh\text{-NP}, vP\}, \{wh\text{-NP}, vP\} \rangle$ i.e., it is non-distinguishable from a trivial, non-movement chain. The *wh*-movement needed for (3a) cannot even be stated non-vacuously in this system, so (3a) is categorically and universally precluded. The alternative derivation in (3b) involves sub-extraction of the degree *wh*-word from the subject. But subjects are islands ([11], [3], [4], [5], [6], a.o.). Thus, such PCs should show the gradient acceptability associated with subject-island violations. [12] offers experimental evidence from German that extraction from subjects in Spec, *vP* is not categorically precluded (yielding an average rating of 3.6 on a 1-7 scale) and that it exhibits substantial variability among speakers, with means ranging 2-5.5.

A related prediction of the SCA is that degree dependencies involving unaccusative subjects should be permitted in PCs, since unaccusative subjects do not originate in Spec, *vP*.

Neither the RA nor the DA makes the above predictions, which stem from locality and island constraints on *wh*-movement. The DA posits no *wh*-movement in PCs. Under the RA, *wh*-movement is to Spec, CP, i.e., not too local, so the whole subject *wh*-phrase can move.

3. Testing the Predictions: 3 Off-line Acceptability-Judgment Experiments in Polish

Because the predictions of the SCA involve gradient unacceptability, quantitative data are needed to test them. Polish is suitable, as it clearly distinguishes CCs and PCs by the type of *than* (*niż* and *od* ‘from’, respectively), and it allows the *niż*-clause to be elided up to a single remnant, in parallel to PCs (e.g., [13]). Experiment 1 compared CCs and PCs with *more*-NP objects (4a,b) and subjects (4c,d). Experiment 2 added 2 more adverbial conditions (4e,f). Each experiment had 24 items like (4), all with different transitive predicates, and 48 fillers of variable acceptability. Sentences were judged on a 7-point rating scale.

- (4) a. Zespół Impresja zatańczył więcej latynoskich tańców *niż* zespół Tęcza
 b. Zespół Impresja zatańczył więcej latynoskich tańców *od* zespołu Tęcza.
group Impresia danced more Latin dances than group Techa
 c. Więcej par zatańczyło tango *niż* poloneza.
 d. Więcej par zatańczyło tango *od* poloneza.
more couples danced tango than polonaise
 e. Wszystkie pary zatańczyły tango lepiej *niż* poloneza.
 f. Wszystkie pary zatańczyły tango lepiej *od* poloneza.
all couples danced tango better than polonaise

The SCA predicts an interaction, with (4d) degraded relative to the other conditions. 4 out of 39 subjects in Exp.1, and 4 out of 30 subjects in Exp.2 show an unexpected pattern of (4c) judged worse than (4d) by >1 point. For the remaining subjects, in both experiments, repeated measures ANOVAs yield significant main effects of type of *than* (*niż* vs. *od*) and position of *more* (subject vs. object (vs. adverb), and, most importantly, significant interactions (5). This suggests that (4d)’s lowest mean is not just a cumulative effect of the two main factors, but an additional effect, which we attribute to the island violation. Underscoring this point, the main effects remain significant when the subject conditions are not included in an ANOVA but there is no interaction (Exp. 2: $F(1,25)=0.77$, $p=0.39$); i.e., the lower mean of (4f) relative to (4a,b,e) is entirely cumulative. The results support the SCA over its alternatives.

(5)	object <i>niż</i> (4a)	object <i>od</i> (4b)	subject <i>niż</i> (4c)	subject <i>od</i> (4d)	adverb <i>niż</i> (4e)	adverb <i>od</i> (4f)	<i>than</i> × position of <i>more</i> interaction
Exp.1	5.78	5.18	5.48	4.38	na	na	$F(1,34) = 6.26$, $p = 0.017$
Exp.2	6.34	5.38	5.53	3.93	5.73	5.09	$F(2,50) = 3.99$, $p = 0.025$

Experiment 3 compared CCs and PCs with unaccusative (6a,b) and unergative (6c,d) subjects. Again, the SCA predicts an interaction, with (6d) having the lowest ratings. A repeated measures ANOVA on 51 subjects revealed a highly significant effect of *than* (*niż* vs. *od*) and, importantly, a *than* × verb type (unaccusative vs. unergative) interaction (see (7)).

- (6) a. W tym sezonie wyrosło więcej dorodnych truskawek *niż* w ubiegłym sezonie
 b. W tym sezonie wyrosło więcej dorodnych truskawek *od* ubiegłego sezonu
in this season grew more ripe strawberries than (in) last season
 c. W tym sezonie spało pod namiotami więcej turystów *niż* w zeszłym sezonie
 d. W tym sezonie spało pod namiotami więcej turystów *od* zeszłego sezonu
in this season slept under tents more tourists than (in) last season

(7)	unacc. subj <i>niż</i> (6a)	unacc. subj <i>od</i> (6b)	unerg. subj <i>niż</i> (6c)	unerg. subj <i>od</i> (6d)	<i>than</i> × verb type interaction
Exp.3	5.04	4.31	5.08	3.70	$F(1,50) = 5.65$, $p = 0.021$

4. Consequences

The results allow for economy in the functional lexicon: only one *more* is needed. The generalization that ν P-deletion does not repair island violations ([18]) receives support. But the analysis of PF-islands in terms of intermediate traces is questioned – there is no such trace in (3b) yet ellipsis does not ameliorate the island violation. Finally, the results illuminate the role of (anti-)locality in *wh*-movement and provide support for a BPS- model of syntax.

Case variation in coordination across Scandinavian varieties

Jeffrey K. Parrott (LANCHART Center, University of Copenhagen)

The following paper is concerned with inter- and intra-individually variable case-form mismatches inside coordinate determiner phrases (CoDPs). For English, this phenomenon is both socially salient (e.g., O'Conner & Kellerman 2009, among many others) and fairly well studied (e.g., Angermeyer & Singler 2003, Quinn 2005, Grano 2006, Parrott 2007: Ch. 6). Several types of variable mismatch can be distinguished. First, 'oblique forms' (OFs = *me, her/him, us, them*) occur in either or both conjuncts of a finite-subject CoDP (1a). Next, 'subject forms' (SFs = *I, she/he, we, they*) occur in prepositional- (1b) or verbal- (1c) object CoDPs. Finally, 'mixed' OFs and SFs appear in both subject (1c) and object (1d) CoDPs.

(1) English attestations, mismatches **bold** (Parrott 2007: Ch. 6)

- a. **Him** and the zombie hunter are fighting.
- b. He thought I was coming between **he** and his wife.
- c. **Him** and I were working at the time.
- d. This is starting to make him and **I** both feel really bad.

A prominent theory of (default) case (Schütze 2001, adapting Johannessen 1998) explains English variation in CoDPs primarily by means of parameterized syntactic mechanisms, but must also invoke extra-grammatical "viruses" (e.g., Sobin 1997, 2009). Following the standard approach (e.g., Lasnik 2008), this theory holds that syntactic-licensing Case is UG endowed and uniform in all languages. However, DPs in parametrically caseless structures must receive a parameterized, language-specific default case exponent in morphology. Schütze proposes a case-spreading parameter for D^0 (not only for Co^0 , as in Johannessen 1998). Thus, unlike German, Case features cannot spread to constituents of DP in English, requiring the elsewhere OF Vocabulary item to be inserted by default for any pronouns in coordination. SFs in CoDPs are the result of Sobin's prescriptively transmitted virus rules that can check Nominative Case on 1sg pronouns following *and*. Crucially, the DP case-spreading parameter is independent of the default-case parameter; these are independent of any other default-construction parameters; and all of them are independent of a language's particular case typology. Because of this micro-parametric independence, it is unclear whether the theory makes cross-linguistic predictions; and accordingly, there has been very little investigation of case variation in CoDPs for languages other than English (there is some in Johannessen 1998, cited by Schütze, see also Sigurðsson 2006 for post-copular/predicate nominals).

This paper therefore has two main purposes. The first is to argue for a developing theory of (default) case within Distributed Morphology (DM) (Halle & Marantz 1993, Embick & Noyer 2007). On this theory, following Marantz (2000) and Sigurðsson (2006, 2008) among others, there are no abstract Case features operative in the narrow syntax. German and similar varieties have 'transparent' case: phonologically distinctive case forms (syncretisms notwithstanding) are found on virtually all nominal elements, such as numerals, nouns, all kinds of pronouns, all kinds of determiners, or adjectives. Adopting McFadden's (2004, 2007) specific DM implementation, case forms in transparent-case languages are exponents of case features assigned by post-syntactic morphological rules. English and similar varieties have 'vestigial' case: phonologically distinctive case forms are limited to a subset of the personal pronouns. Implementing Emonds (1986) in DM, English pronominal case forms are not exponents of case features, but instead are allomorphs of a pronoun's structural position: a pronoun's exponent is the SF when the pronoun itself is the specifier of finite tense ($T[\pm\text{past}]$), and the OF in all other contexts. There are no case features in the Vocabulary, only structural information about the insertion context. Consequently, it is unnecessary to postulate any kind of case spreading parameter for (Co)DPs. A pronoun inside of a CoDP is

either the specifier or the complement of the coordinate head Co^0 (Johannessen 1998, Munn 1994); any pronoun inside of a CoDP is not the specifier of $T[\pm\text{past}]$ and must receive elsewhere OF exponence. For extra-linguistic social reasons, individuals may (but need not) learn non-competing ‘supplementary’ pronominal Vocabulary items that provide SF exponents to certain pronouns that are linearly adjacent to the coordinate head (i.e., *and I* or [*s*]*he and*) (Parrott 2007, Ch. 6, 2009).

In contrast with the parametric theory, this DM theory makes cross-linguistic predictions about the connections between case mismatch in CoDPs, case typology, non-nominative subjects, and default case forms. These predictions can be expressed as implicational hierarchies. If a language has transparent case, it will have non-nominative subjects, and vice-versa; it will also have Nominative forms as defaults, and case mismatches in CoDPs will be impossible. If a language has vestigial case, non-nominative subjects will be impossible, and vice versa. Vestigial-case languages can have either SFs or OFs as the default; if the former, case mismatches in CoDPs will not be attested, and if the latter, they will.

Such predictions are eminently testable in North Germanic languages, which display a remarkably high degree of inter- and intra-individual variation in case morphosyntax. Thus, the paper’s second purpose is to present some findings from several empirical research projects, some still in progress, which employ various methodologies to investigate case variation in CoDPs for varieties of insular and mainland Scandinavian. As predicted, case mismatches in CoDPs are not reported for transparent-case Faroese (Thráinsson *et al.* 2004), and field interviews with 40 native speakers found no evidence of such variation. Moreover, interviews with older native speakers of Övdalian, an endangered transparent-case variety spoken in Sweden (Levander 1909, Sapir 2005, Dahl & Koptjevskaja-Tamm 2006, Svenonius 2008, Garbacz 2009), indicate that case mismatches in CoDPs are not possible. Finally, such variation is not reported for transparent-case Icelandic (Thráinsson 2007), as additionally confirmed by several linguist native-speakers. As predicted, in vestigial-case, OF-default Danish, pronominal case-form mismatches in CoDPs are socially salient (e.g., Bjerre 2006, among many others), described in the literature (e.g., Allan, Holmes & Lundskær-Nielsen 1995, Jørgensen 2000), and well attested in both written and spoken corpora (Parrott 2009, Hilton & Parrott 2009).

(2) Danish attestations, mismatches **bold** (Hilton & Parrott 2009: a-c, Parrott 2009: d)

- a. **hende** og hendes bror] har selvfølgelig gået i de samme institutioner
her and her brother have of course gone to the same institutions
- b. der er to år mellem min bror og **jeg**
there are two years between my brother and I
- c. øh jamen **ham** og jeg vi kørte hjem i går
uh well him and I we drove home yesterday
- d. En terapi med [hende og **jeg**] ville have været [...]
a therapy with her and I would have been [...]

However, vestigial-case varieties of Swedish and Norwegian raise significant issues that must be addressed by further empirical research, along with a refinement of the DM theory as stated above. According to linguists and native speakers of SF-default Swedish, case mismatches in CoDPs are not attested (see also Thráinsson 2007). Field interviews in Torsby, Sweden also found no evidence of such variation. Case mismatches in CoDPs have been reported in Norwegian (Johannessen 1998, Hilton & Parrott 2009), where the default case form seems to vary by dialect. While field interviews in Stange, Sørskogbygda, and Skaslien, Norway found no evidence of case mismatches in CoDPs, one speaker from Oslo indirectly acknowledged the phenomenon, indicating its social salience.

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The Structure of **A**

Markus A. Pöchtrager (markus.pochtrager@boun.edu.tr), Boğaziçi Üniversitesi, İstanbul

In Government Phonology, the special status of the element **A** (to be found in non-low vowels and in coronals) has long been noted (Cobb 1995, 1997; Kaye 2000). In this talk I will suggest that **A** is not melodic (*i. e.* not an element), but structural, and that this is the reason for its oddness. I will illustrate the thrust of the argument with two major pieces of evidence (**E1–E2**) from English, but the implications (*cf.* corollaries below) are assumed to be universal.

(E1) English has monosyllables of the type V:C₁C₂, such as *paint*, *feast* or *weird*. In such structures both members of the cluster must be coronal (Fudge 1969), *i. e.* contain **A**, with a proviso for *a* (as in *task* or *draft*). The systematicity does not end there, however: There is a clear connection between vowel height and the voicing of C₂, as noted in Pöchtrager (2006).

(i) i: (I)	(ii) u: (U)	(iii) e:/ei (A·I)	(iv) o:/ou (A·U)	(v) ɔ: (U·A)	(vi) ɑ: (A)
<i>fiend</i>	<i>wound</i>	*	*	*	<i>command,</i> <i>demand...</i>
*	*	<i>paint,</i> <i>saint...</i>	<i>wont,</i> <i>don't...</i>	<i>taunt,</i> <i>haunt...</i>	<i>aunt,</i> <i>grant ...</i>

After vowels with no **A** we only find *nd*, after vowels with **A** and some other element only *nt*, after vowels with **A** alone both *nd* and *nt*. The pattern of interdependency varies with the cluster; but again, **A** plays a crucial role:

(i) i: (I)	(ii) u: (U)	(iii) e:/ei (A·I)	(iv) o:/ou (A·U)	(v) ɔ: (U·A)	(vi) ɑ: (A)
<i>weird</i>	(*)	*	*	<i>board...</i>	<i>card...</i>
*	*	*	*	<i>court...</i>	<i>cart ...</i>

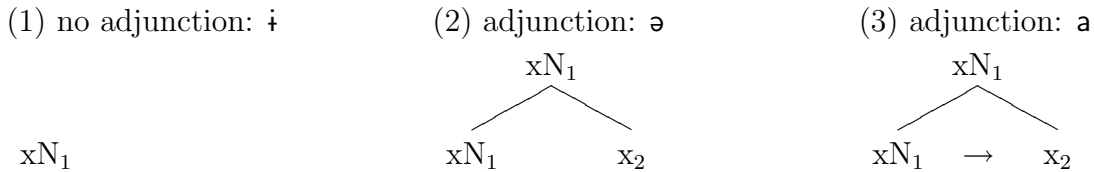
Long vowels with **A** as a non-head cannot be followed by either *rt* or *rd* (which probably follows from the fact that they cannot be followed by *r*: **feir*, **four*); long **A**-headed vowels can be followed by *rt* and *rd*, and long vowels without **A** only by *rd* (*weird*). (The status of *u:* is open to debate, but the general pattern seems to hold.)

Under current assumptions it is unclear *why* vowel height (presence/role of **A**) would interact with an unrelated property such as voiceless/neutral. Such an interaction between unrelated properties fails the Non-Arbitrariness Principle of GP which demands that there be a direct relation between a phonological phenomenon and its context (Kaye, Lowenstamm & Vergnaud 1990: 194). Furthermore, voiceless/neutral was argued to be a structural difference in Pöchtrager (2006), while **A** is usually seen as a melodic property. This makes the patterns above all the more puzzling. If **A** interacts with structure, the inevitable conclusion is that **A** must be structural itself. What we see is not an interaction between structure and melody, but between two structural properties. This brings us closer to a non-arbitrary explanation.

The idea that the difference between, say, a *d* and a *t* in English is structural (*i. e.* a length difference) is not fairly wide-spread, though supported by a fair amount of evidence. Is there any further support then for the claim that **A** is structural, support that does not involve the distinction voiceless/neutral? The answer is yes, and this brings us to **E2**.

(E2) In (Southern) British English, superheavy monosyllables in *sp*, *sk*, *ft* behave markedly differently from those in *st*: *st* allows for any long vowel preceding it: *beast*, *priest*, *boost*, *roost*, *taste*, *paste*, *last*, *fast*, *host*, *roast*, *exhaust* etc. Contrast this to *sp*, *sk*, *ft*, which only allow for long *a* to precede them, but no other long vowel. We find *grasp*, *clasp*, *mask*, *task*, *draft*, *craft* etc., but never **kli:sp*, **e:sk*, **dru:ft* etc. The difference between these two types of cluster is easy to see: In *st*, *both* members of the cluster contain **A**. In *sp*, *sk* and *ft*, on the other hand, only *one* member contains **A**. It is as if the lack of a second **A** in the latter group can be made up for by the **A** in the vowel (but only if the **A** there is by itself, as in *a*), thus allowing *draft* (going beyond Fudge’s original observation). A long vowel before C_1C_2 thus requires the presence of two **A**’s. Melody (**A**) and structure (length) interact in intricate ways, and again, this violates non-arbitrariness, suggesting that **A** should rather be seen as structural.

Arguments like these can easily be multiplied. While evidence that **A** be reinterpreted as structure is mounting, it is still somewhat unclear *what exactly* this structure should look like. I propose that **A** is to be replaced by an adjunction structure (head adjunction) as in (2–3).



A particular head position (here xN₁, a nuclear head) is broken up into two levels and the lower level combines with another skeletal point, x₂ (2–3). This makes expressions that previously contained **A** structurally bigger than those without (two *vs.* one position); *cf.* † in (1) which does not involve an adjunction structure (no **A** in old terms) to the structures of ə and a (both of which used to involve **A**.) What differentiates the latter two is whether the adjoined x₂ is used up (see below), as indicated by the arrow in (3), or not (2). Structures parallel to (1–3) but with an onset head (xO₁ instead of xN₁) are also possible.

Making **A** structural has a number of interesting corollaries, all of which seem to be correct:

(C1) The number of coronals in English outweighs the number of *e. g.* labials. With adjunction we have twice as many possibilities to represent expressions that formerly contained **A**, *viz.* (2) and (3). In other words, we expect such an asymmetry in number between (former) **A** and elements such as **U**, where no extra structure is involved.

(C2) While in (3) x₂ is claimed by the head and inaccessible for other purposes, x₂ in (2) is unused. This unused room might explain why “superheavy structures” of the type V:C₁C₂ are possible in the first place (Fudge’s observation); in consonants, the unused room might be used by a preceding nucleus, giving us a long vowel, thus connecting coronality with vowel length.

(C3) Kaye (2000) and Pöchtrager (2006) proposed that **A** can govern non-**A** as a restriction on clusters and diphthongs. This governing potential might be derivable from structural size (*cf.* the metrical requirement of many languages that heads [governors] of feet need to branch.)

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On the Semantic and Syntactic Licensing of Double Negation

Genoveva Puskás (University of Geneva)

1. Purpose and main points of the proposal

This paper discusses the semantic and syntactic licensing of negative elements (n-words) in double negation contexts (DN). It assumes, following Giannakidou (2000) a.o. that n-words in negative concord languages do not have an intrinsic negative content. Under such an assumption, two questions arise: (i) how can non-negative n-words contribute a DN reading? (ii) Is there a relation between the interpretation and the syntax of DN? The paper proposes that in NC languages, DN arises in specific discursive contexts, which signal the presence of a non-standard use of negation. Thus the semantic contribution of an n-word in a DN context has to be distinguished from its standard, sentence-level contribution. It is also shown that these discursive contexts are associated with specific syntactic structures, and the syntactic licensing of n-words in DN crucially relies of these structures. Finally, the paper investigates the consequences of such an approach on DN in non-NC languages. It is shown that the discursive contexts are identical, suggesting that identical interpretive constraints hold. However, as the n-words are intrinsically negative in these languages, the syntactic licensing might not need to be as strict as in NC languages.

2. Semantics

Given the various uses of DN in NC languages, it appears that DN can be divided into two sub-species, labelled *strong* DN and *weak* DN. Strong DN is associated with a heavy primary stress (small caps). It has the effect of negating a negative proposition p as a whole, by contributing a unique, polar alternative to the (negative) assertion expressed in the clause. I show, using data from Hungarian, a strict NC language, that this kind of DN is an occurrence of wide-scope metalinguistic negation and is typically triggered when an n-word is focussed (1). I propose that strong DN is a case of Verum Focus (Höhle 1996); the n-word is licensed by a Verum operator, an epistemic operator the contribution of which is to assert that the speaker is certain that the content of p should not be added to the Common Ground (see Romero and Han 2001). Thus sentence (1) can be assigned the LF and paraphrase in (2)

Weak DN, on the other hand, is associated with a fall-rise intonation (\surd). It has the effect of negating some portion of a negative proposition p . Although it is an instance of metalinguistic negation (see also Giannakidou 1998), it does not contribute a wide-scope negation. I claim that it is triggered by the marking of an n-word for Contrastive Topic (CT) (3). Weak DN is a case of constituent negation, which is dependent on sentential negation. Because of the interpretive properties of Contrastive Topics, an n-word marked for CT will be interpreted as negative with respect to its context of occurrence, namely that of a negative sentence. Thus, it is parasitic on regular sentential negation, and can only be licensed as depending on it. The meaning of (3) can thus be paraphrased as (4).

3. Syntax

I show that the syntactic licensing of n-words also builds on the syntax of Focus and CT. Since strong DN is available when an n-word is marked for Focus, I show that the n-word has to occur in the contrastive/corrective Focus position. In Hungarian, this position is the specifier of a functional projection FocP in the left periphery (Brody 1990 a.o). The syntactic analysis tables on the proposal (Pesetsky and Torrego 2007) that valuation and interpretability of a feature are two independent concepts. While the sentential negation marker bears a feature which is an interpretable unvalued neg feature, ($iNeg$ [$_$]), an n-word, being non-negative per se, bears an uninterpretable feature which is nevertheless valued $uNeg$ val [$_$]. The feature on Neg^0 is valued by *Agree* with an n-word. The latter, having established an *Agree* relation with the Neg head bearing an interpretable counterpart $iNeg$, gets its uninterpretable feature deleted. The n-word thus contributes, along with the negative marker, to sentential

negation. But the n-word in the Focus position escapes sentential negation. Building on recent proposals about Focus (E-Kiss 2006, Kenesei 2009), I propose that a Focus construction is a covert cleft constructions, whose null head realizes the Verum operator. The copula bears an interpretable V(ERUM)- Focus feature which is unvalued, *iV-FOC* []. Similarly, an n-word marked for Focus bears an uninterpretable V-foc feature which is valued (bearing polarity neg), *uV-FOC val* []. The n-word enters into an *Agree* relation with the VERUM head which is thus assigned a value and the uninterpretable feature of the n-word gets deleted. The two neg-chains function independently, yielding the DN reading.

Weak DN is characterised by the presence of an n-word in the CT position. The position hosting Contrastive Topics (CTopP) is a left-peripheral projection located between TopP (which hosts “regular” topics) and FocP (Gécseg 2002). An n-word in CTopP contributes to a DN reading if the sentence already contains a regular, sentential negative chain. In that sense, it is parasitic on the “primary” neg-relation. The feature licensing mechanism of the primary chain is identical to the one described above. But the n-word occurring in CT cannot participate in this negative chain. As it is constituent negation, I assume that its value is different from that of the n-word participating in sentential negation. Moreover, the feature of the negative head is valued by the n-word participating in sentential negation. Therefore, the CT n-word cannot enter into NC with the primary negative chain. On the other hand, the uninterpretable feature of the CT n-word has to be deleted. It can only do so as an element which is parasitic on the sentential negation chain, under certain syntactic constraints, very much in the line of the parasitic licensing described in Den Dikken (2002).

4. Non-NC languages

These languages also show the same two types of DN, which are associated with the same discursive functions (5). It is shown that the analysis can be extended to these languages as well. Strong DN is a case of focussing which requires licensing by a Verun Focus. Such an approach can be adopted both for English (non-overt Focus movement) and German (overt movement). On the other hand, weak DN builds on the presence of a primary neg-chain, but the licensing of the parasitic constituent negation needs CT movement. While this movement is overt in German, it is proposed that in English, the n-word undergoes covert CT movement, and connects to the primary negative chain. (6)

- (1) SEMELYIK FILMET nem ismerte senki.
 no film-ACC NEG knew-3S n-person-NOM
 'Nobody knew no film.'
- (2)a. LF= [FOR-SURE-CG-NOT [_{IP} there is a film such that no individual knows it]]
 b. "it is for sure that that we should add to CG that it is not the case that is a film such that no individual knows it".
- (3) √semmiröl 'senki nem beszélt.
 Nothing-DELAT nobody-NOM NEG spoke-3S
 'About nothing, nobody spoke.'
- (4) "among the possible alternatives which arise in the context, the one associated with the relevant context is that no thing was such that nobody talked about it"
- (5)a. NOBODY said nothing
 b. None of the students liked √no film.
- (6)a. √Mit niemandem habe ich über "nichts geredet.
 with nobody have I on nothing talked
 'I didn't speak about nothing with anybody'
 b. "Never have I bought √nothing for your birthday.

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1. Summary. In this talk we will propose a novel analysis of ATB that involves asymmetric extraction from the first conjunct. The extracted operator is related to that in the second conjunct via ellipsis. Ellipsis accounts for systematic mismatches between the two conjuncts. By means of a derivational implementation of ellipsis based on Agree, ellipsis can be adequately restricted, and certain cases of non-parallel ATB can be accounted for. The approach offers a uniform perspective on ATB in that it can be extended to languages that combine gaps and resumptives in ATB-contexts as well as to cases of asymmetric LF-movement in coordination.

2. Resumptives in ATB-contexts. Several languages can combine gaps and resumptives in ATB-contexts. Crucially, a form of the CSC applies in such languages as well in that all conjuncts have to involve an A'-dependency (gap or resumptive). This is illustrated by the following examples from Zurich German (ZG):

- (1) a) de Lehrer, wo [de Hans ___ verehrt] und [d Susi **über en** fluecht]
 the teacher C the John ___ adores and the Susi about him swears
 'the teacher that John adores and Susi swears about'
 b)*de Lehrer, wo [de Hans de Peter verehrt] und [d Susi **über en** fluecht]
 the teacher C the John the Peter adores and the Susi about him swears
 lit.: 'the teacher who John adores Peter and Susi swears about'

Resumptive relatives in ZG can be shown to involve base-generation. Consequently, the coordinations involve different types of chains. This requires a reformulation of the CSC as a constraint on vacuous quantification (rather than movement) or as a constraint that requires the coordination of likes (conjuncts with A'-binding differ from those without), cf. e.g. Fox (2000).

3. Parallelism with asymmetric LF-movement. The resumptive facts are directly parallel to cases of asymmetric LF-extraction discussed in Ruys (1992) and Fox (2000). They show that asymmetric LF-movement (QR or LF-wh-mvt) is in principle impossible, but becomes available if the LF-moved constituent can bind a pronoun in the second conjunct:

- (2) a)*I wonder who [took *what* from Mary] and [gave a book to Fred].
 b) I wonder who [took *what* from Mary] and [gave *it* to Fred]. (Ruys 1992: 36)

The resumptive and LF-mvt cases can thus be unified: In (1)a and in (2)b there is asymmetric extraction from the first conjunct, the operator ends up binding its trace as well as a pronoun in the second conjunct so that no vacuous quantification obtains.

3. In favor of ellipsis in ATB. We propose extending the asymmetric extraction analysis to bona fide ATB cases with gaps in each conjunct, but with one important difference: ATB with gaps involves ellipsis. Evidence for ellipsis comes from systematic mismatches between the conjuncts:

a) *Morphological mismatches.* The first type of mismatch involves ATB-verb-movement. An (2006: 8) was the first to note asymmetric agreement in English ATB-verb-movement:

- (3) Who **does** *he* like and *they* hate?

The same can be observed in ZG (asymmetric agr must be with the first verb):

- (4) Was₁ häsch₂ [(du) ___₂ ___₁ gchaufft] und [de Peter ___₂ ___₁ verchauft]?
 what have.2s you bought and the Peter sold

We propose that there is no extraction from the second conjunct. Rather, the copy of the verb (and of the operator, cf. next section) in the second conjunct is elided under identity with that in the first conjunct. Since ellipsis is known to tolerate such mismatches, these facts argue for ellipsis, but against approaches that take the copies in the conjuncts to be identical (Nunes 2004, Citko 2005).

b) *Vehicle change effects.* Munn (1993) claims that reconstruction only targets the first conjunct and takes this as evidence for his Parasitic Gap-approach to ATB:

- (5) a) Which pictures of **himself** did John buy ___ and Mary paint ___? Principle A
 b)*Which pictures of **herself** did John buy ___ and Mary paint ___? (Munn 1993: 52)

- (6) a)* Which picture of John_i did **he**_i like ___ and Mary dislike ___? Principle C
 b) Which picture of John_i did Mary like ___ and **he**_i dislike ___? Citko (2005: 494)

However, it can be shown that reconstruction CAN target the second conjunct (cf. Citko 2005: 492). Here is an example illustrating variable binding (Nissenbaum 2000: 44):


- (7) Which picture of his_i mother did you give to every Italian_i and sell to every Frenchman_i?

These facts argue against both the PG-approach to ATB as well as approaches based on identity (Nunes 2004, Citko 2005). The ellipsis approach advocated here accounts for partial reconstruction: Since there are copies in both conjuncts, symmetrical reconstruction as in (7) is expected. The cases of apparent non-reconstruction in (5)a and (6)b are actually semantically tolerated mismatches familiar from vehicle change (Fiengo & May 1994). As in other ellipsis contexts, *him* can count as identical to *himself*. The copy in the second conjunct in (5)a is thus *picture of him*. (6)b is possible because vehicle change licenses the mismatch between pronouns and R-expressions: *picture of him* in the second conjunct counts as identical to *picture of John*. Importantly, since extraction takes place from the first conjunct, the copy in the first conjunct must be identical to the antecedent, thereby accounting for the ungrammaticality of (5)b and (6)a. The facts in ZG are similar, but crucially, with anaphors, there is only invariant *siich* which can be bound by either subject:

- (8) [Weles Grücht über *siich*_{i/j}] hät [de Hans_i ___ ghört], aber [d Susi_j ___ ignoriert]?
 which rumor aboutself has the John ___ heard but the Susi ___ ignored

Next to the strict reading (with the copy in the second conjunct = ‘rumor about him’) the example also allows for a sloppy identity reading (with the copy in the second conjunct = ‘picture of self’). The possibility of a sloppy reading provides additional striking evidence for ellipsis.

4. Implementation. Ellipsis applies derivationally, at the point when the conjuncts are joined together. The operators thus first undergo movement in each conjunct, thereby accounting for the locality effects in ATB (pace Bachrach & Katzir 2009). Ellipsis is licensed by Agree (Aelbrecht 2009) between & and the constituent to be elided. Since Agree is involved, ellipsis always targets the right conjunct (c-command). Furthermore, it can only target accessible elements, i.e. constituents on the edge of the highest vP-phase and elements above. This correctly restricts ATB-ellipsis to A'-moved constituents on the edge of vP and auxiliaries /subjects above vP:

- (9) [_{&P} & [_{TP} Mary ~~did~~ [_{vP} ~~what~~ hate]]]


Importantly (this differs from e.g. Merchant 2001), the E-feature is located on the elements to be elided. Upon checking, elements with an [E]-feature are shipped off to PF and become inaccessible for further syntactic operations. Having [E]-features for each elided element may seem surprising, but this assumption is crucial to accommodate cases of non-parallel ATB (which can't be derived if the E-feature leads to deletion of the complement of some head, e.g. the verbal head as in Ha 2008):

- (10) Who did John support ___ and Mary say ___ would win? DO – embSU

Once both conjuncts are merged, there is asymmetric extraction from the first conjunct. The operator forms 2 chains (with its own copy and with the operator in the second conjunct). Via chain reduction all lower copies are deleted, and at LF the operator binds the two lowest copies, which are converted into variables:

- (11) a) [_{CP} What₁ did₂ [_{&P} [_{TP1} John ~~did~~₂ [_{vP} ~~what~~₁ like ~~what~~₁] & [_{TP2} Mary ~~did~~ [_{vP} ~~what~~ hate ~~what~~]]]]]?
 b) [_{CP} What [_{&P} [_{TP1} John did [_{vP} like x] & [_{TP2} Mary did [_{vP} hate x]]]]]?

Finally, identity is computed semantically, via mutual entailment of the F-closures of the deleted constituents, cf. Merchant (2001). This accounts for the mismatches in (3)–(6). For the Principle C-case in (6)b we get the following correct mutual entailment (after applying ∃-type shifting):

- (12) ∃x, (picture of John (x)) ⇔ ∃x, (picture of him (x))

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Syllable lengthening and prosodic boundaries in Brazilian Portuguese

Raquel S. Santos and Eneida G. Leal

In this paper we analyze the relation between syllable duration and prosodic constituents in Brazilian Portuguese (*BP*), a language in which duration is the main acoustic correlate of primary stress and any radical change in syllable duration can change the word selected.

Previous studies on syllable duration have shown that syllable lengthening is a common process that can occur both in left (Oller 1973) and right prosodic boundaries (Oller 1973, Klatt 1976, Wightman et al 1992, Fougeron & Keating 1997). These studies also claim that the higher the prosodic domain, the longer the syllable in a prosodic boundary is. Fougeron & Keating (1997) also showed that in the right boundary of an intonational phrase, the syllable in the boundary and the last stressed syllable of the sentence are both lengthened. They argue that this is so because the stressed syllable also carries intonational stress. Finally, Byrd, Krivokapic & Lee (2006) show that lengthening spreads leftwards up to three syllables from the prosodic boundary, with lengthening getting weakened as the distance between the syllables and the prosodic boundary increases.

Studies on BP stress show that duration is the main acoustic correlate for primary stress (e.g. Fernandes 1976, Massini-Cagliari 1992). Fernandes (1976) and Major (1981) showed that in BP, pre-tonic syllables are longer than post-tonic ones. Fernandes also claim that post-tonic syllables are longer inside sentences than in sentence boundaries. Although none of them controlled for prosodic domains in their analyses, in Major's (1981) experiment the target-word occurs between phonological phrase boundaries. Therefore, these results suggest that in the phonological phrase domain, pre-tonics are longer than post-tonics in BP. These results also seem to show that BP does not pattern with what was found in other languages, for post-tonic syllables should be lengthened in this context.

Assuming the prosodic hierarchy proposed by Nespor & Vogel (1986), we examined syllable duration in the intonational phrase (I), the phonological phrase (ϕ), the clitic group (C), and the phonological word (W). We tested 22 subjects with respect to 10 words and pseudo-words inserted in four different prosodic boundaries, in 858 sentences. All the words tested were three-syllables with medium primary stress (weak-strong-weak) and with the same syllable structure (CV). The weak syllables also had the same segmental material and we balanced the consonants for voice and the vowels for height.

First, we compared the syllables in the different prosodic boundaries. Our results (cf. Graphic 1) show that the duration of pre-tonic syllables is almost the same in all prosodic domains (0.189 ms), being a little longer in I (0.196 ms). Stressed syllables are also a little longer in I, being 1,12 longer than in ϕ . The largest difference in duration was found among the post-tonic syllables: they are 1,36 times longer in I than in W, and 1,47 times longer in I than in ϕ . There was a statistically significant difference between post-tonic syllables in I and the syllables that fill the other prosodic boundaries (p-value < 0.001), but there was no significant difference between post-tonic syllables in ϕ and in C (p-value = 0.34) or in W (p-value = 0.11), or between post-tonic syllables in C and in W (p-value = 0.54). As for the pre-tonic syllables, there was a significant difference in the duration of the syllables in I and the ones in ϕ (p-value = 0.016). Interestingly, this pattern did not hold for the other comparisons. That is, there was no significant difference between syllables in I and syllables in C (p-value = 0.6) or in W (p-value = 0.09); or between syllables in ϕ and the ones in C (p-value = 0.06) or in W (p-value = 0.48); or between syllables in C and in W (p-value = 0.25).

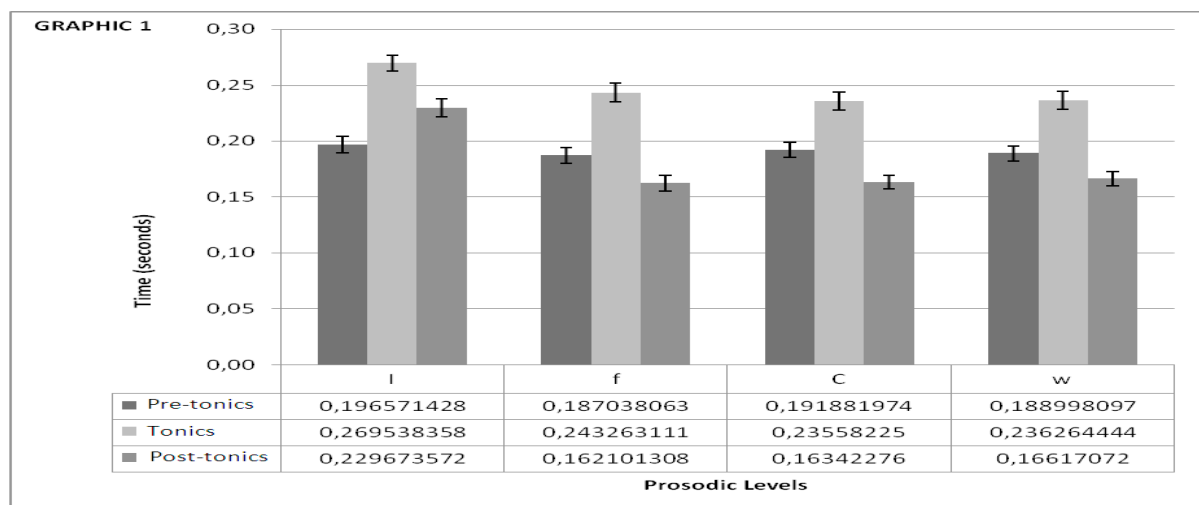
We also tested if the segmental content of the weak syllables could have any impact on the results. We distinguished the syllables filled with voiced and voiceless consonants and low and high vowels. Our results show that the mean duration of the syllables with voiced

consonants is shorter for the syllables with voiceless consonants. The log-linear Gaussian model revealed an effect of the consonant in pre- and post-tonic syllables. However, the effect was the same for all prosodic domains (p-value = 0.70 for pre-tonic syllables, p-value = 0.057 for post-tonic syllables). Although the syllables with high vowels were a little longer than low vowels, the log-linear Gaussian model showed no effect of vowel quality (p-value = 0.174 for pre-tonic syllables, p-value = 0,091 for post-tonic syllables). Additional tests also showed that there was no effect of the kind of word tested (real or pseudo-word).

Our results showed no significant difference between duration in boundaries of C and W, which can be interpreted as indicating that these prosodic domains are not distinguished in BP. Additionally, our results confirm Fernandes (1976) and Major (1981) findings that in BP, pre-tonic syllables are longer than post-tonic ones. This in turn can be taken as evidence for the proposal that in BP, feet are iambic and the last weak syllable of the word is extrametrical (cf. Lee 1994).

Finally, we turn to the previous results in the literature. On the one hand, our results replicate some findings for other languages. As we can see, final syllable lengthening is associated with the higher prosodic domain (I) (cf. e.g. Oller 1973, Klatt 1976, Wightman et al. 1992 and Fougeron & Keating 1997). On the other hand, our results do not confirm other analyses. We found no effect of the height of the relevant prosodic levels, that is, there was no syllable lengthening on the lower prosodic levels (W, C, ϕ), contrary to the view that the higher the prosodic level, the longer the lengthening is. Our results also show that syllable lengthening for pre-tonic and stressed syllables are restricted to I. Most importantly, even when there is post-tonic lengthening in I, it is never the case that the post-tonic syllable becomes longer than the stressed syllable.

The paper concludes with a discussion of the issue of whether the stressed syllable is lengthened because (i) it is the syllable that carries intonational accent (Fougeron & Keating 1997); (ii) it is closer to I boundary, that is, the second from the right edge (cf. Byrd, Krivokapic & Lee 2006); or (iii) it is the one that carries primary stress and should not be mistaken for other syllables. Since the main acoustic correlate of BP primary stress is duration, our hypothesis is that stressed syllables also lengthen in order to maintain the meaning of the word. Take, for instance, the pair *sabia* [sa'bi.a] “(he) knows” vs. *sabiá* [sa.bi'a] “turtoid bird”. If the post-tonic syllable in *sabia* lengthens longer than the stressed syllable, the word changes to *sabiá*.



On the interaction between verb movement and ellipsis in the PF-component

Erik Schoorlemmer & Tanja Temmerman, LUCL/Leiden University

1. Outline: Languages vary with respect to whether or not verb movement is bled by ellipsis. We propose that this variation can be accounted for by crosslinguistic differences in the size of the ellipsis site in combination with the independently motivated claim that head movement cannot have a landing site in an elided constituent.

2. The data: There is language variation as to whether or not ellipsis bleeds verb movement. Van Craenenbroeck & Lipták (2008) present strong morphological evidence that verb movement is bled by ellipsis in Hungarian. In Hungarian embedded non-elliptical yes/no-questions, the suffix *-e* is obligatorily added to the finite verb, cf. (1a). It cannot occur on any other element. In case the finite verb of an embedded yes/no-question is elided, as in (1b), this *e*-suffix attaches to a non-verbal element, i.e. the focused proper name *János* in (1b).

- (1) a. Kiváncsi vagyok, hogy JÁNOS ment*(-e) el. [Hungarian]
curious I.am COMP János went*(-Q) PV
'I wonder whether it was János who left.'
- b. Valaki el-ment. Kiváncsi vagyok, hogy JÁNOS*(-e).
Somebody PV-left curious I.am COMP János*(-Q)
'Somebody left. I wonder whether it was János ~~who left~~.'

Van Craenenbroeck & Lipták (2008) argue that *-e* occurs on a non-verbal element in (1b) because ellipsis prevents the verb from moving out of the ellipsis site to the head hosting *-e*. As the verb is unavailable as a host, *-e* attaches to the first non-verbal element to its left instead.

However, ellipsis does not always bleed verb movement out of an ellipsis site. In Russian, verb movement is not blocked by ellipsis, as shown by Gribanova (2009). She argues that that in Russian (2), the verb *kupil* moves out of an elided VP. She demonstrates convincingly that (2) is not an instance of argument drop.

- (2) Dina kupila svojej dočke škol'nyje [Russian]
Dina.NOM bought.3SG.F REFL.DAT daughter.DAT school.ACC
učebniki, a Paša ne kupil.
textbooks.ACC but Paša NEG bought.3SG.M
'Dina bought her daughter textbooks, but Paša didn't ~~buy her/his daughter textbooks~~.'

We propose that this variation is due to the impossibility of head movement having a landing site inside the elided constituent.


3. Head movement and ellipsis: We will first show that the impossibility of head movement targeting a landing site in an elided constituent comes for free if: A. head movement is an operation that takes place in the PF-component of the grammar (Chomsky 1995 et seq.; Boeckx & Stjepanović 2001, among others) and B. ellipsis is non-insertion of vocabulary items in the postsyntactic morphological component (Aelbrecht 2009; Saab 2009). In addition, we adopt the following assumptions: 1. Head movement is triggered in order to provide a suffixal head with a host (see, among many others, Harley 2004; Vicente 2007), 2. Vocabulary items are inserted in a postsyntactic morphological component (Distributed Morphology, Halle & Marantz 1993) by a process called Vocabulary Insertion.

Under these premises, the information whether or not a head is spelled out as a suffix only becomes available at Vocabulary Insertion in the postsyntactic morphological component. Consequently, on the assumption that suffixal heads trigger head movement, head movement has to take place after Vocabulary Insertion. Head movement is sensitive to syntactic hierarchical structures, given that it crosses specifiers and adjuncts. Hence, it must apply in the derivation before syntactic structure has been linearized. We therefore conclude that head movement takes place after Vocabulary Insertion but before Linearization.


In this model of the grammar, it straightforwardly follows that head movement cannot have a landing site in the elided constituent. On the view that ellipsis is non-insertion of vocabulary items, a head in the ellipsis site is not associated with a Vocabulary Item. Consequently, it is not specified whether it is a suffix or not and as a result cannot trigger head movement. An elided head will therefore not constitute a landing site for head movement.

4. Accounting for the data: The Hungarian and Russian examples differ with respect to the size of their ellipsis site. The Hungarian example (1b) is an instance of non-WH sluicing (Van Craenenbroeck & Lipták 2006) and involves deletion of TP. The Russian example (2), on the other hand, is an instance of VP-ellipsis (Gribanova 2009). This difference in size together with our conclusion that head movement cannot land in an ellipsis site explains the contrast between Russian (2) and Hungarian (1b) as follows.

In Hungarian non-elliptical embedded questions, the finite verb moves to the head hosting the $-e$ suffix via T° , as in (3a). In (1b), however, TP is elided. Therefore, T° cannot be a landing site for verb movement. Consequently, at the point of the derivation where the head hosting the $-e$ suffix wants to attract the verb, the verb is still in V° . Movement of the verb from V° to the head hosting the $-e$ suffix would therefore have to take place in one fell swoop, skipping the intermediate T° , in violation of the Head Movement Constraint (HMC) (Travis 1984), as in (3b).

- (3) a. $[[V+T+e]_{-e} [{}_{TP} t_{V+T} [{}_{VP} t_V]]]$ NO ELLIPSIS: HEAD MOVEMENT

- b. $[[e]_{-e} [{}_{TP} T [{}_{VP} V]]]$ TP-ELLIPSIS: NO HEAD MOVEMENT


On the other hand, verb movement can leave the ellipsis site in the Russian example in (2) because VP is elided instead of TP. As a result, the verb does not have to make an intermediate landing in a head contained within the ellipsis site in order to reach its surface position, as shown in (4b). The verb movement in (4b) therefore does not violate the HMC, contrary to the movement in (3b).

- (4) a. $[{}_{TP} [V+T]_T [{}_{VP} t_V]]$ NO ELLIPSIS: HEAD MOVEMENT

- b. $[{}_{TP} [V+T]_T [{}_{VP} t_V]]$ VP-ELLIPSIS: HEAD MOVEMENT


5. Extending the proposal Our proposal can easily be extended to Turkish sluicing (Ince 2006; van Craenenbroeck & Lipták 2008) and Hebrew and Irish VP-ellipsis (Goldberg 2005). Turkish resembles Hungarian in that a suffix that occurs on the verb in a non-elliptical clause, shows up on the WH-remnant in sluicing. Hebrew and Irish are similar to Russian: verb movement can escape the VP-ellipsis site in these languages.

Irish, however, differs slightly from Hebrew and Russian in that it requires the subject to be absent in VP-ellipsis, even with verbs that do not allow null subjects in non-elliptical contexts (Goldberg 2005, McCloskey 1991). We argue that this does not pose a problem for our account, but follows straightforwardly from our view of head movement combined with the assumptions that VP-ellipsis in Irish is actually ν P-ellipsis (Goldberg 2005) and Irish ν° is not a trigger for head movement.

Time permitting, we will address the issue why phrasal movement out of an ellipsis site is not subject to an identity requirement, while the head-moved antecedent- and target-clause main verbs have to be held isomorphic in Russian, Hebrew and Irish VP-ellipsis (the *Verbal identity requirement*, cf. Goldberg 2005; Gribanova 2009). We will derive this contrast from the different timing of phrasal movement and head movement. As argued above, head movement takes place after ellipsis. Phrasal movement occurs in narrow syntax and, therefore, precedes ellipsis. We will argue that this difference in timing is vital for explaining why only head movement is subject to an identity requirement.

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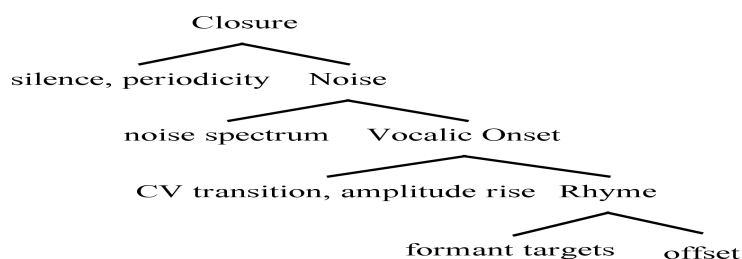
Tashlhiyt Berber (TB) is notorious for its syllable structures, in which any segment type may occupy the nuclear position. Understandably, the language has acquired celebrity status as an obstacle that any theory of phonotactics must overcome, and there have indeed been many important studies of TB syllabification. For example, Dell and Elmedlaoui (1985) provide a comprehensive rule-based syllabification in which sonority plays a decisive role. Prince and Smolensky (1993) employ TB in their introduction of Optimality Theory. Clements (1997) refines the constraint-based approach to handle problematic morphological and prosodic effects. Other studies have taken up the question of whether syllables without vowels in TB may be derived from more traditional structures containing a vocalic nucleus (e.g. Coleman 2001, Ridouane 2008). All of these studies accept a traditional assumption about phonological constituents: that they must be built up from nuclei.

Onset Prominence (Schwartz 2009) is the driving force behind a theory of segmental specification that incorporates a new perspective on constituent structure to gain insight into phonotactic issues. Starting from the perceptual principle of the primacy of onsets (e.g. Content et al. 2001), we assume that all segments are specified for auditory properties that are present in initial positions. The structure in (1) may be seen as a universal from which all segmental representations are derived. The top three layers of structure denote the inherent sequencing of specific auditory properties associated with onset articulations. We predict from (1) that stops, with closure that produces a robust landmark in the acoustic signal (Shattuck-Hufnagel and Veilleux 2007), should represent the preferred segment type for delineating constituents. Built into this tree is a non-arbitrary scale of phonological strength, or *Onset Prominence* (OP), defined as the number of layers in a given segment's onset structure. Stops are characterized by three layers of onset structure. Fricatives and nasals contain two layers of OP, while liquids and approximants contain one. In the basic mechanism of constituent formation, an increase in OP from one segment to the next marks the start of a new constituent. Codas are derived when speaker/hearers fail to reconstruct (Ohala 1981) onset structure, submerging spectral (melodic) specification under the rhyme of the preceding segment. Constituent formation for TB /tʃ.tft/ 'you crushed' is given in (2)

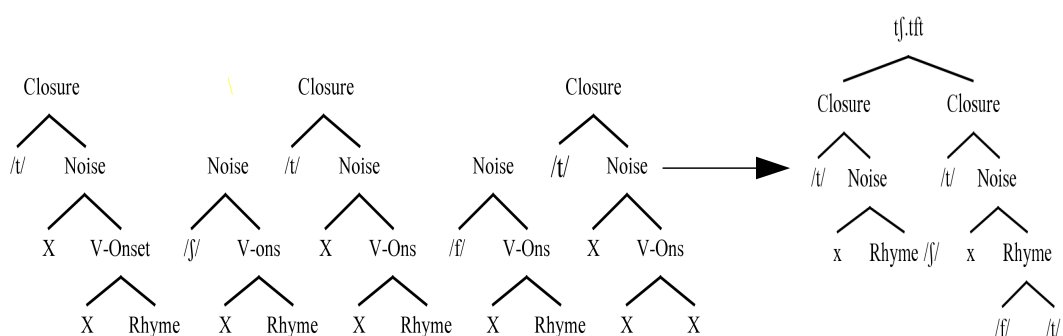
OP offers a useful perspective on a number of significant generalizations about the TB syllabification data. The first and most obvious is that a final consonant is never an onset; its OP is not reconstructed, and the final /t/ in (2) appears in the rhyme. Secondly, there is a constraint against complex 'branching' onsets, seen here as a prohibition against more than one melodic annotation in the top three layers of onset structure, submerging the noise of the fricatives in /tʃ.tft/ from the Noise level to occupy a rhymal position in (2). Additionally, Clements (1997) notes that the ONSET constraint in TB is only violated in initial position. Seen from the OP perspective this generalization suggests that initial vowels in TB may be annotated at the V-Ons level. In forms like /iʃ.kd/ 'broken branch', the complex onset constraint submerges the /ʃ/, preventing a constituent break between the /i/ and /ʃ/. The liberties that TB takes with the traditional consonant-vowel distinction may be viewed here structurally. In TB all segment types are specified with the rhymal nodes from (1), while in languages that observe a strict consonant-vowel division, only vowels contain rhymal structure.

Onset Prominence explains TB syllabification without the circularity of sonority-based approaches (Harris 2006), and suggests that constituent formation, unlike other prosodic phenomena such as weight and stress, should be based on onsets rather than nuclei. Phonetic features associated with onsets produce identifiable boundaries in the speech signal, providing a speech-based link with the fundamental property of phonology: discreteness.

(1) Onset-Rhyme structure



(2) Segmental specification and constituent formation for /tʃ.tft/ 'you crushed'



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Strong positions maintain their strength: Universal and lexical effects in the acquisition of L1 Spanish allophones

Christine Shea

University of Calgary, Department of Linguistics

In this paper I examine whether positional effects in child L1 acquisition are uniquely attributable to grammatical/phonetic considerations (Inkelas & Rose, 2008) or if language-specific patterns also play a role in the emergence of target-language productions. I examine data from two L1 Spanish-speaking children (2;1–3;1) and consider how they produce the voiced stop [b d g] – voiced spirant [β ð γ] alternation. According to phonological descriptions of Spanish, the voiced spirants surface in intervocalic position, within the word and also the phrase. Stops surface post-pause. Thus, stops surface in strong positions (i.e., domain-initial) and voiced spirants occur in weak positions (i.e., domain-medial).

I argue that strong positions remain strong in child Spanish - domain-initial segments are rarely, if ever, produced as voiced spirants by children or adults. However, weak positions are initially produced as an unstable mixture of stops and spirants. Universal linguistic principles dictate that stops are less marked in physiological terms than spirants and therefore emerge first in child speech. Nonetheless, such universal effects can be modulated by language-specific input (Lléo & Rakow, 2005). Thus, Spanish-speaking children acquiring the stop-spirant alternation are subject to two conflicting pressures: One is direct and results from universal phonetic and perceptual constraints imposed by the human speech system; the second is attributable to the way in which language-specific lexical and frequency effects drive the emergence of more marked segments (see also Edwards & Beckman, 2008).

I predict that Spanish speaking children will produce stops in contexts where voiced spirants are expected and not vice versa, consistent with the universal preference for stops over continuant segments. However, following the research on lenition and frequency (Bybee, 2001; Coetzee, 2009; Myers, 2009; Pierrehumbert, 2001), when the voiced spirants *do* emerge in children's productions, they should occur in higher frequency words. The emergence of voiced spirants in weak positions will occur first in words that are highly frequent in the input received by children and the language they produce. Such a finding would suggest that acquiring positional alternations of this type involves a complex interplay between universals and language-specific effects. Specifically, the development of phonological knowledge that includes positional effects involves universal biases and language-specific lexical knowledge.

I examined data from three corpora. The first is from two children (MG and FC, ages 2;1–3;1) acquiring Spanish as an L1, recorded over a nine month period in naturalistic play contexts. The second includes corpora based upon L1 Spanish child-caregiver interactions, taken from Spanish child language databases found in CHILDES. The first consisted of child productions (C-Corpus) and the other of child-directed speech (CDS-Corpus). The children ranged in age from ten months to five years of age.

Data

Corpus 1: Recorded productions

MG: Out of 209 total lexical tokens with b, d or g singleton targets, 61% of all target segments occurred in strong position, of which 76% were produced with voiced stops.

Prosodically weak positions occurred in 39% of the tokens, of which 51% were produced with the target voiced spirants.

FC: Out of 71 total tokens, 39% occurred in strong position, of which 79% were produced with voiced stops. Prosodically weak positions occurred in 61% of all tokens, of which 62% were produced with voiced spirants.

While both children produced the allophonic alternation, accuracy rates were higher for the voiced stops than for the voiced spirants. This follows the universal predictions that stops are generally easier to articulate than continuants. The emergence of the allophone in the weak position did not occur uniformly across all tokens at the same time. Both children mixed stops and voiced spirants in their productions throughout the data collection period.

Corpus 2: CHILDES Corpora

To determine whether there was a relationship between lexical frequency and the emergence of weak position allophones in Spanish, I compared the log frequency counts across the C and CDS Corpora and the Spanish CDI (Maldonado et al., 2003) for the words which were realized in a target-like fashion, i.e., with the expected voiced spirant, to those which were realized in a non-target-like manner, i.e., with the stop allophone. If token lexical frequency plays a role in the development of positional knowledge in child productions, then the words which are realized with the voiced spirants should be more frequent than those which are realized with a stop in the weak position.

Table 1: Average log frequencies (across both children)

	<u>CHILD PRODUCTION CORPUS</u>	<u>CHILD-DIRECTED SPEECH CORPUS</u>	<u>SPANISH CDI</u> (% of children 30 months of age who use the word)
Target-like	1.53	2	80%
Non-target like	.92	1.2	44%

Discussion

The data supports the hypothesis that the universal effect of stops in strong position was mediated by lexical effects: as the children increased their lexical knowledge – both perception and production – frequency effects emerged for target-like realization of the voiced spirant in weak position. In order to account for this data, we require a model that can incorporate both types of effects in phonological development. The PRIMIR framework (**P**rocessing **R**ich **I**nformation from **M**ultidimensional **I**nteractive **R**epresentations, Werker & Curtin, 2005) provides a developmentally oriented account of how this might be possible. PRIMIR is grounded in two observations: first, rich information is available in the speech stream and second, the listener filters that information. Infants bring three filters to the speech learning task: epigenetically-based biases, such as those which drive the preferences for stops in strong positions, developmental level and finally task effects. Representations in PRIMIR are exemplar-based and sensitive to context - segments in word-initial position will cluster with similar positionally-occurring segments. PRIMIR accounts for such positional sensitivity by means of exemplar-based representations that are formed through statistical clusterings of phonetically-similar sounds. In conclusion, a model such as PRIMIR can account for the patterning found in the data presented here, whereby young children maintain stops in strong positions and only after sufficient experience with Spanish, begin to produce voiced spirants in weak positions.

Person-Case Effects in Tseltal

Kirill Shklovsky, MIT (*kirills@mit.edu*)

Controversy surrounds two central questions in the theory of case and agreement: (A) the proper explanation for the ubiquitous *person-case constraint* (PCC; Bonet 1991), which prohibits 1/2-person direct objects in the presence of an indirect object; and (B) the nature and source of *ergative case*. Some, but not all, recent accounts of PCC attribute the effect to a single head checking features of multiple goals (Anagnostopoulou 2003, 2005; Béjar & Rezac 2003 *vs.* Bonet 1991, Adger & Harbour 2007, *i.a.*) Likewise, some accounts analyze ergative as an inherent case assigned by v to its specifier, but this too is controversial (Woolford 1997, Legate 2008 *vs.* Marantz 2000, Bobaljik 2008, *i.a.*) This paper argues that the interaction of PCC with ergative agreement in *Tseltal* (Mayan, Mexico; author's fieldwork) narrows down the space of viable proposals, providing simultaneous support for multiple-agree theories of PCC and inherent-case theories of ergative case.

Multiple agree accounts of PCC crucially propose that the ϕ -feature [person] on an NP needs licensing, and that a probe's second instance of Agree cannot license 1st or 2nd person. In an accusative language, if the ϕ -probes include finite T and v (but not Appl), we expect to find PCC effects mainly in ditransitive configurations — since it is v that will find itself the sole available probe for two NPs in its domain. In an ergative language, if the inherent-case proposal is correct, v does not probe its domain or assign structural case. This leaves finite T as the only source of structural case for lower nominals that might otherwise have been separately probed by v — which predicts in turn that PCC effects should arise whenever finite T must probe more than one such nominal. This configuration should arise, for example, in cases of non-finite complementation in an ergative language, whenever the subordinate clause contains a nominal direct object — and matrix finite T must probe a higher nominal before it reaches this direct object.

In this paper I show that *Tseltal* confirms this prediction. Like accusative languages, *Tseltal* shows a PCC restriction in mono-clausal ditransitives (1). Crucially, however, *Tseltal* also shows the PCC effect in bi-clausal constructions involving non-finite “clauselet” embedding (2-3) — so long as the matrix verb's other argument is absolutive (2), and not ergative (3). This is explained as follows. *Tseltal* ergative is an inherent, θ -related case assigned by v , a claim independently supported by the absence of raising to ergative in *Tseltal* (*vs.* Artiagoitia 2001, Rezac 2006 on Basque). If θ -related case on a nominal is realized as a phasal PP (Rezac 2008), then *Tseltal* ergative NPs are expected to be invisible to higher ϕ -probes. In (2a-b), there is a single ϕ -probe: the matrix T, which is the source of absolutive agreement. 2a is a raising construction, so the probe's first agreement target is the clauselet subject. The matrix T continues to probe, finding the embedded object and agreeing with it. Because this is T's second agreement relation, the [person] features of the embedded object cannot be licensed, yielding a PCC restriction. The situation is different if the embedding verb assigns inherent ergative to its subject, as in (3). Here the matrix subject receives ergative from the matrix v , and is thus invisible to the ϕ -probe on matrix T. Consequently, the first agreement target reached by matrix T is the embedded object. Consequently, its [person] features can be licensed, and no PCC restriction is observed. As expected, absolutive agreement with the embedded object is realized on the matrix verb. This account makes two other correct predictions: first, that other quirky-subject embedding verbs also fail to exhibit PCC effects; and that PCC holds in *Tseltal* ditransitives regardless of whether the ditransitive clause is active or passive (4). Finally, note the crucial role played by the proposal that θ -related ergative case on Spec, vP is invisible to ϕ -probes in *Tseltal*. If it were visible, PCC effects would surface in simple transitive clauses. These are in fact the properties of the Icelandic quirky-subject construction, as analyzed by Anagnostopoulou (2005; also references therein) — now distinguished from *Tseltal* transitive clauses by one parameter (Rezac 2008).

- (1) a. lah y-ʔaʔ-b-at j-k'oht mut
PFV ERG:3-give-APPL-ABS:2 1-NC chicken
'He gave you a chicken'
- b. * lah y-ʔaʔ-b-at joʔon(-eʔ)
PFV ERG:3-give-APPL-ABS:2 me(-CL)
'He gave you me'
- (2) a. yakal-on ta spetel te alal-eʔ
PROG-ABS:1 PREP ERG:3-hug-NF DET baby-CL
'I am hugging the baby'
- b. * yakal-on ta spetel jaʔat(-eʔ)
PROG-ABS:1 PREP ERG:3-hug-NF you-CL
'I am hugging you'
- (3) a. j-k'an spetel te alal-eʔ
ERG:1-hug ERG:3-hug-NF DET man-CL
'I want to hug the baby'
- b. j-k'an-at spetel (jaʔat-eʔ)
ERG:1-hug-ABS:2 ERG:3-hug-NF you-CL
'I want to hug you'
- (4) a. ʔaʔ-b-ot-on me mut-eʔ
give-APPL-PASS-ABS:1 DET chicken-CL
'I was given a chicken'
- b. * ʔaʔ-b-ot-on jaʔat-eʔ
give-APPL-PASS-ABS:1 you-CL
'I was given you'

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No Case Licensing: Evidence from Uyghur

Kirill Shklovsky, MIT
kirills@mit.edu

Yasutada Sudo, MIT
ysudo@mit.edu

Two views on case dominate the current generative landscape. The case-licensing view (Chomsky 1981 and its descendants) holds that all NPs need structural or inherent case, which is assigned by heads, and if an NP lacks case the derivation crashes. The case-competition view (Marantz 2000, Bobaljik 2008) suggests that there is no such thing as case-licensing and morphological case (for NPs without inherent case) is determined post-syntactically by some algorithm that counts all the NPs eligible for case-assignment within some domain. We propose, on the bases of data from Uyghur (Turkic, North China and Kazakhstan), that the traditional dichotomy is wrong, and that while linguistic theory needs structural case (case assigned by heads), at least in some languages with structural case there is no case filter. Specifically we propose that in Uyghur, nominative case is a default case, available to any NP, while accusative is a structural case, assigned to NPs with particular features by functional heads.

Our main tool for examining case marking in Uyghur are the subjects embedded in finite complement clauses, which, unlike matrix subjects, can optionally receive accusative case (1). Following Shklovsky and Sudo 2009 for Uyghur and Şener 2008 for Turkish, we demonstrate that the embedded accusative subjects are generated in the embedded clause and that they are raised to a higher position than embedded nominative subjects. Unlike the claims in Şener 2008, there is evidence that Uyghur embedded accusative subjects do not receive case from the embedding verb: the evidence comes from passivized embedding verbs (2), embedding verbs that assign lexical case to their complements (3), and behavior with respect to double accusative constraint (4). We propose therefore, that embedded accusative subjects receive accusative case from the embedded complementizer.

The situation in the clausal domain parallels the situation in the VP domain: the fact that objects in Turkic languages can either receive accusative or no case marking has been known since at least Enç, 1991. Accusative objects both in Turkish and Uyghur may appear in positions further away from the verb, whereas objects lacking case marking must be adjacent to the verb word. Two main types of analysis have been proposed for this phenomenon in Turkish: noun-incorporation (Mithun 1984, Kornfilt 2003, Aydemir 2004 *inter alia*) or Niuean-style (Massam, 2005) pseudo noun incorporation (Öztürk, 2005). Evidence from causativization, adjectival modification, and coordination argues strongly against noun incorporation theory both in Turkish (Öztürk, 2005) and Uyghur. The pseudo noun incorporation proposal, (PNI) suggests that bare NP objects (that is, those lacking accusative case) lack a DP projection and thus are not referential, but are syntactically active. We demonstrate, however, that in Uyghur, embedded objects lacking case marking can be referential, and therefore, there is no empirical support for the pseudo noun incorporation theory.

We argue that the fact that subjects and objects lacking accusative case receive same morphological exponents is not an accident, but rather a fact begging for an explanation. We observe that both in the domain of VP and CP, a particular NP can be either in a lower position and caseless (or “nominative”) or in a high position and accusative. The same has been proposed for Spanish differential object marking in Torrego 1998, and Rodríguez-Mondoñedo, 2007. Following these proposals we argue that accusative case (on objects or embedded subjects) is a consequence of a head probing for a (possibly abstract) feature in its complement domain. If an appropriate goal NP is found (such as an object bearing [+specific] feature) then agree takes place and the NP receives accusative case. What is new in our proposal is the account of what happens if such structural case assignment does not take place: we argue that when an NP does not receive structural (accusative) case from a functional head, it receives nominative as a default. Neither the standard theory of case-assignment nor the case competition theory, we argue, can account for Uyghur facts without resorting to additional unsupported stipulations.

We argue, therefore, that case assignment does not necessarily equals case-licensing, and that while the proponents of case-competition approaches are correct to argue that case-licensing is not a necessity, the linguistic theory still needs structural case-assignment.

- (1) a. Tursun [oqughuchi ket-ti dep] bil-du
Tursun.NOM [student.NOM left.PAST.3 C] know.IMPF.3
'Tursun knows that a student left'
- b. Tursun [oqughuchi-ni ket-ti dep] bil-du
Tursun.NOM [student-ACC left.PAST.3 C] know.IMPF.3
'Tursun knows that a student left'
- c. oqughuchi-(*ni) ket-ti
student-(*ACC) left.PAST.3
'A student left'
- (2) a. oqughuchi-(ni) ket-ti bil-en-di
student-NOM left-PAST.3 know-PASS-PAST.3
'It was known that a student left'
- (3) a. Ahmet [Aslan-ning kit-ken-liq-i-din] guman kil-di
Ahmet [Aslan-GEN leave-REL-NMLZ-3-ABL] suspect do-PAST.3
'Ahmet suspected that Aslan left'
- b. Ahmet [Aslan-ni ket-ti dep] guman kil-di
Ahmet [Aslan-ACC leave-PAST.3 C] suspect do-PAST.3
'Ahmet suspected that Aslan left'
- (4) a. Tursun [oqughuchi-(*ni) profesor süy-di dep] bil-du
Tursun.NOM [student-(*ACC) professor-ACC left.PAST.3 C] know.IMPF.3
'Tursun knows that a student kissed a professor'
- b. Tursun [oqughuchi-ni profesor-(*ni) süy-di dep] bil-du
Tursun.NOM [student-ACC professor-(*ACC) left.PAST.3 C] know.IMPF.3
'Tursun knows that a student kissed a professor'
- c. Tursun [oqughuchi-ni imtihan-din ött-di dep] bil-du
Tursun.NOM [student-ACC test-ABL pass.PAST.3 C] know.IMPF.3
'Tursun knows that a student passed a test'

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‘Quirky tense marking’ in Slavic and Creole languages

1. In this paper we account for a range of facts about the tense and aspect markers in Russian, Serbo–Croatian and Capeverdean Creole using a theory that is based on a neo–Reichenbachian view of temporal relations combined with current minimalist postulates. We introduce here the notion of “quirky tense marking” to refer to inflectional morphology conveying *past features* that receives a *future interpretation* and vice-versa. Even if the phenomenon under discussion has scarcely attracted attention among scholars, it is by no means marginal, but crosslinguistically well attested (cf. Iatridou (2000) on Modern Greek).
2. “Quirky tense marking” occurs in Russian perfective past–tense verbs of motion (and perfective–inchoative verbs as well) receiving a present or future interpretation, given an appropriate context, as in (1). Likewise, in Serbo–Croatian the so-called “verbal adjective” (which is actually a participle that combines with a copula in the past perfect) may receive an optative/imperative interpretation, as in (2). Again, in Serbo–Croatian the aorist–perfective verbs can be interpreted as future-oriented (3). Moreover, the “quirky tense marking” in Russian can take the opposite direction, viz. future–inflected perfective verbs can receive past interpretation, as in (6). These examples can all be equated with the “default” reading of past morphology which convey past interpretation, as expected (5). Crucially enough, the same range of shifted temporal interpretations is observed in Capeverdean (and other Creoles as well), where “quirky tense marking” is pervasive in both directions, i.e. the past for the future and vice-versa, as in (4) and (7). The point here is that the temporal interpretation of the event being described is not morphologically driven, but “shifted” somehow. Following current minimalist assumptions, if (morpho)syntax sends only interpretable τ -features to LF, this implies that the shifted interpretation must depend on other systems of language external to computation (cf. Chomsky 2000; Pesetsky & Torrego 2007).
3. Our goal is to provide a unified account for “quirky tense marking” in Slavic and Creole languages to support evidence in favour of the null hypothesis that there is a division of work between morphosyntax and pragmatics. As a matter of fact, empirical evidence about morphological inflection systematically receiving a wide range of interpretations demands a strong theoretical stance on attempt to incorporate the fact that the temporal interpretation is compositional and context–dependent (see Bar–Hillel 1954; Austin 1962; Grice 1975).
4. As many scholars pointed out (e.g. Hornstein 1990), the temporal location of an event time (E) cannot be proved by directly linking (E) to the deictic moment of speech (S), because of the fact that (S) is an extralinguistic entity. Then, a *reference variable* (R) is taken into account to bind (S) into syntactic structures. In this guise, as part of the language faculty, (R) acts as an interface between syntax and pragmatics. Hence, all SE relations must be mediated by (R), entailing that all “tenses” are composed of basic relations determined through SR and RE structures. Then, the mapping rules between terms of the two relations assign (i) *overlapping* (e.g. S,R) or (ii) *linear order* based on precedence “<” (e.g. R<S = R is prior to S; or S<R = R is later than S) – notice that the same is valid for RE relation as well. We assume, therefore, that the RE relation is aspectual in nature in (1)–(7) and instantiated *via* morphemes and functional heads. Conversely, the SR relation is pragmatically driven, according to the “Principle of Relevance” that a given utterance is interpreted in some context on the basis of the least amount of information (Sperber & Wilson 1986). One should bear in mind that only (i) and (ii) relations are the primitives of the system, whereas labels such as “past” and the likes in the glosses are just interpretations.
5. As sketched in Tables (1)–(3), if tense is morphological absent (as in “pošel”, etc.), aspectual features alone can establish *bare minimum* RE relation. Hence, they can be spelled–out and receive an interpretation (LF). The RS relation will assign another interpretation that forces morphology to be valued. Thus, the resulting interpretation is compositional between morphosyntax and pragmatics, in the CP domain – following standard assumptions.

(A) Past features encompassing a future-oriented reading.

- (1) *Nu, ja PO-ŠE-L* *Russian*
 PRT 1SG go.ASP[PF].T[_{PST}].SG.M
 “Well, I’m leaving”
- (2) *U zdravlju PO-Š-L-A i što tražiš našla* *Serbo-Croatian*
 loc health.LOC go.PF.T[_{PST}].SG.F and what look.for.T[_{PRS}].2SG find.PF.T[_{PST}].SG.F
 “May you be in health and prosper and may you find what you are looking for”
- (3) *Ken ke trá kabésa primer é ke TA PAGÁ* *Capeverdean*
 who that pull head first be.PRS that ASP[_{IMPF}] pay.PST
 “The first to pull out the head (will) pay”
- (4) A: — *Mogu li tvoji od zemlje živjeti?* *Serbo-Croatian*
 can.3PL.T[_{PRS}] PRT yours from land (to)live.INF
 “Can your people make a living from the land?”
- B: — *Ne mogu, UBI nas suša*
 NEG can.T[_{PRS}].ASP[_{IMPF}].3PL kill.ASP[PF].T[_{AOR}].3SG us.ACC drought.NOM
 “They cannot, the drought will kill us”
[J. Kosor]

R is later than S: S<R.										
[CP	C	[TP	T	[AspP	Asp	[VP	V	[AspP	Asp _m	
(S<R) R is later than S “future”	}	}	[E<R]	(1)	po-		-še-		-I	
			[E<R]	(2)	po-		-š-		-I(-a)	
					[PF]					[ANT]
			[E,R]	(3)	ta			pagá		
			[E,R]	(4)	u-			-bi		
			[E<R]		[PF]			[AOR]		
			[E<R]							

Tab.1

- (5) *Ja PO-Š-EL v svoju komnatu i leg spat'* *Russian*
 1SG go.ASP[PF].ASP[_{ANT}].SG.M to REFL room and lay.ASP[PF].ASP[_{ANT}].SG.M sleep.INF
 “I went to my room and I laid down to sleep”

R is prior to S: R<S.									
[CP	C	[TP	T	[AspP	Asp	[VP	V	[AspP	Asp]]]]]]
(R<S) R prior to S “past”	}	}	[E<R]		po-		-še-		-I
			[E<R]		[PF]				[ANT]

Tab.2

(B) Future features encompassing a past-like reading

- (6) {*Noč' byla tichaja, slavnaja, ...*} *Veter to PRO-Š-EL-ESTIT v kustach* *Russian*
 It was a still, glorious night ... wind now rustle.ASP[PF].FUT.3SG in bushes
 “A breeze rustled now and then in the bushes”
[Turgenev]
- (7) *Pratu di madera un bes TA PARSE so ku tijéla* *Capeverdean*
 dish of wood D past ASP[_{IMPF}] appear[_{-PST}] only with bowl
 “In the past, wooden dishes would only appear as bowls”

R is prior to S: R<S.										
[CP	C	[TP	T	[AspP	Asp	[VP	V	[AspP	Asp]]]]]]	
(R<S) R is prior to S “past”	}	}	[E<R]		pro-		-še-		-I(-estit)	
			[E,R]		[PF]				[_{-ANT}]	
			[E,R]		ta			parse		
			[E,R]		[_{IMPF}]			[_{-ANT}]		

Tab.3

**The PF-theory of islands and the WH/slucing correlation:
New evidence from Dutch and English fragment answers.**

Tanja Temmerman (Leiden University/LUCL)

A. Outline This paper investigates Dutch fragment answers (FAs) in comparison to their English counterparts. While the former are insensitive to islands and can in general be embedded, the latter show locality effects and only occur in root contexts. I argue that the difference in island sensitivity follows naturally if Dutch FAs are given an account parallel to that of sluicing, i.e. fronting to Spec,CP and TP-ellipsis. I also show that there is variation among the Dutch embedded FAs: one type of embedded FA, which *is* – unlike the other Dutch FAs – island-sensitive, moves from Spec,CP to matrix Spec,*i*P (prior to the TP-ellipsis). The analysis provides support for (a version of) the *PF-theory of islands*, according to which island sensitivity is due to non-deletion of PF-uninterpretable traces. Finally, I argue that the *WH/slucing correlation* makes the correct predictions regarding the (non-)embeddability of English and Dutch FAs.

B. Fragment answers in Dutch & English: basic properties

B.1. Definition FAs, both in English and Dutch, are answers consisting of a non-sentential XP with the same propositional content and assertoric force as a full sentential answer (cf. Merchant 2004).

- (1) Q: *Wie gaat de wedstrijd winnen?* 'Who is going to win the contest?'
A: *Eva.* (= *Eva gaat de wedstrijd winnen.*) 'Eva.' (= 'Eva is going to win the contest.')

B.2. Ellipsis Merchant (2004) argues that English FAs are derived from full sentential structures by ellipsis (PF-deletion), as the FA exhibits connectivity effects identical to those shown by its correlate in a non-elliptical sentence. This is also true for Dutch (root and embedded) FAs, cf. (2) with variable binding.

- (2) Q: *Wat vindt elke politicus_i uiterst belangrijk?* 'What does every politician_i hold in high regard?'
A: *Zijn_i imago.* / *Elke politicus_i vindt zijn_i imago uiterst belangrijk.*
'His_i image.' / 'Every politician_i holds his_i image in high regard.'

B.3. Movement Merchant (2004) also provides several diagnostics to show that a FA has A'-moved prior to ellipsis (i.e. the elided clausal structure hosts the trace of the movement operation). One such diagnostic is preposition stranding: while P-stranding languages like English allow both PP and 'bare' DP FAs to WH-questions with a preposition, in non-P-stranding languages like Dutch only PP FAs are possible, cf. (3).

- (3) Q: *<Naar> wie was Peter <*naar> aan het kijken?* 'Who was Peter looking at?'
A: a. *Naar Lisa.* b. **Lisa.* '(At) Lisa.'

C. Fragment answers in Dutch & English: main differences

C.1. Dutch, but not English, FAs are island-insensitive Whereas English FAs obey island constraints – as expected if they involve A'-movement – Dutch FAs do not. Morgan (1973) and Merchant (2004) use *implicit salient questions* (yes-no questions with an intonation rise on an XP *in situ*) to test for the island sensitivity of FAs. Example (4) shows that Dutch, but not English, FAs can violate a relative clause island.

- (4) Q: *Willen ze iemand aannemen die GRIEKS spreekt?* 'Do they want to hire someone who speaks GREEK?'
A: *Nee, ALBANEES.* *'No, ALBANIAN.'

Sluicing, i.e. clausal ellipsis leaving a WH-remnant, is island-insensitive as well (Ross 1969; Merchant 2001).

- (5) *Ze willen iemand aannemen die een Balkantaal spreekt. – Welke?*
'They want to hire someone who speaks a Balkan language. – Which one?'

C.2. Dutch, but not English, FAs are embeddable The question in (6) allows for a number of different embedded FAs in Dutch (cf. also Barbiers 2002). Embedded fragments of 'type 1' (A₁) follow the matrix past participle, while 'type 2' FAs (A₂) precede it. FAs like (A₃) are ambiguous between type 1 and type 2. Their English counterparts are ungrammatical (cf. also Morgan 1973; Merchant 2004).

- (6) Q: *Wie dacht je dat de wedstrijd zou winnen?* 'Who did you think would win the contest?'
A₁: *Ik had gedacht Eva.* A₂: *Ik had Eva gedacht.* A₃: *Ik dacht Eva.* *'I (had) thought Eva.'

Like root FAs in Dutch, the embedded fragments of type 1 are not sensitive to islands, as illustrated in (7a) with an adjunct island. FAs of type 2, on the other hand, *do* obey locality constraints, cf. (7b). This crucial difference indicates that the latter type of FA should be given a different analysis.

- (7) *Is Ben gekomen omdat hij ROOS wil versieren?* 'Has Ben come because he wants to seduce ROSE?'
a. *Nee, ik had gedacht / zou denken LISA.* *'No, I had thought / would think LISA.'
b. **Nee, ik had LISA gedacht / ik zou LISA denken.* *'No I had LISA thought / would LISA think.'

D. The analysis of Dutch & English FAs and the PF-theory of islands

D.1. The analysis of root FAs (and sluicing) The theoretical approach adopted here is a Merchant (2001, 2004)-type implementation of ellipsis in terms of the syntactic feature [E]. In sluicing, [E] is merged with the C°-head whose TP-complement is to be elided (cf. Merchant 2001, van Craenenbroeck 2004). Although it is not entirely clear *why* or *how*, it seems that the presence of the [E]-feature on C° requires that

this head always remains empty, even in languages which allow doubly-filled-COMP-filter violations in non-elliptical embedded WH-questions, such as various Dutch dialects. This is illustrated in (8).

(8) *Ben wil een meisje versieren, maar ik weet niet wie (*dat).* 'Ben wants to seduce a girl, but I don't know who (*that).'

The analysis of sluicing is schematically represented in (9): [E] is merged with C°, the WH-phrase moves to Spec,CP, and TP is elided. Much recent work on ellipsis adheres to the *PF-theory of islands*. For instance, the basic conception of Merchant (2004, 2008) is that traces of island-violating movement are PF-uninterpretable (marked with *) and cause a PF crash if they are not eliminated. In (9), TP-ellipsis deletes all defective traces, yielding a PF-interpretable object. This derives the island insensitivity of sluicing.

(9) $[_{CP} WH_1 [C^\circ [E]] [_{TP} \dots *t_1 \dots t_1 \dots]]$

To deal with the difference in island sensitivity between English sluices and FAs, Merchant hypothesizes that English FAs target an additional CP-layer, leaving a trace in an intermediate Spec,CP, cf. (10a). In (10a), one *-trace is not deleted by TP-ellipsis, causing a PF-crash. Dutch FAs resemble sluicing in being island-insensitive. Hence, we can assume that they are simply the non-WH-equivalent of sluicing, cf. (10b).

(10) a. $[_{CP} XP_1 C^\circ [_{CP} *t_1 [C^\circ [E]] [_{TP} \dots *t_1 \dots t_1 \dots]]]$ b. $[_{CP} XP_1 [C^\circ [E]] [_{TP} \dots *t_1 \dots t_1 \dots]]$

Although this analysis nicely accounts for the differences in island sensitivity, it is not that clear what the motivation for the extra movement step in English FAs is, other than the need for a non-elided trace. However, Dutch embedded FAs provide evidence that this PF-theory of islands is on the right track.

D.2. The analysis of Dutch embedded FAs Embedded FAs never surface with *dat* 'that', although this complementizer is obligatorily present in non-elliptical subclauses, cf. (11). If the structure of the CP-complement of *denken* 'think' in (11a) resembles the structure in (10b), with the C°-head hosting an [E]-feature, the absence of *dat* is expected, on a par with the absence of an overt complementizer in sluicing. I assume that the structure of the island-insensitive FAs of type 1 is indeed similar to that of root FAs.

(11) a. *Wie heeft het gedaan? – Ik zou denken <*dat> Eva <*dat>.* 'Who has done it?' – *'I would think Eva.'
 b. *Ik zou denken *(dat) Eva het gedaan heeft.* 'I would think that Eva has done it.'

Barbiers (2002) analyzes FAs of type 2 as involving (A'-)Focus-movement of XP (*Eva* in (6)) to the matrix Spec,νP. This fronting is not at all unmotivated, as it is also allowed in non-elliptical sentences in Dutch:

(12) *Ik had [Eva] gedacht dat zou winnen.* 'I had thought that Eva would win.'

Barbiers claims that this fronting is followed by PF-deletion of the embedded CP. Merchant's PF-island theory provides a diagnostic for deciding whether type 2 FAs involve CP-ellipsis, or TP-ellipsis like the other Dutch FAs. Compared to FAs of type 1, type 2 FAs involve an extra movement step (to Spec,νP), leaving a trace in the embedded Spec,CP. While CP-ellipsis deletes this trace, TP-ellipsis does not. If the moved XP crossed an island node, a non-elided *-trace would cause a PF-crash. Thus, CP-ellipsis predicts type 2 FAs to be island-insensitive, while TP-ellipsis predicts island sensitivity. Type 2 FAs differ from the other Dutch FAs exactly in obeying locality (cf. section C.2), showing that the latter prediction is correct.

E. Why Dutch, but not English, FAs are embeddable Both English and Dutch exhibit (at least) two types of clausal ellipsis: sluicing and FAs. However, while embedded sluicing occurs in both languages, only Dutch FAs are embeddable. The key to solving this puzzle is van Craenenbroeck & Lipták's (2006) *WH/sluicing correlation (WhSC)*: "the syntactic features that [E] checks in a certain language are identical to the strong features a WH-phrase checks in that language." A precise analysis of English and Dutch WH-movement requires that the CP-domain be split up in two functional projections: the low CP₂ is related to operator-variable dependencies, the high CP₁ to clause typing (cf. Culicover 1991; den Dikken 2003; van Craenenbroeck 2004). Following the literature, I claim that English and Dutch overt WH-movement do

(13)		overt WH-movement	[E]	ellipsis site
En	root	Spec,CP ₂	C ₂ °	TP
	emb	Spec,CP ₁	C ₁ °	CP ₂
Du	root	Spec,CP ₁ or Spec,CP ₂	C ₁ ° or C ₂ °	CP ₂ or TP
	emb	Spec,CP ₁ or Spec,CP ₂	C ₁ ° or C ₂ °	CP ₂ or TP

not necessarily target the same CP-projection. The *WhSC* says that [E] surfaces in the same CP-layer as the WH-phrase. Accordingly, clausal ellipsis in English and Dutch will have different properties. All this is schematically represented in table (13).

The movement operation preceding ellipsis in FAs, i.e. left-peripheral focus fronting, targets Spec, CP₂ (cf. Culicover 1991; Authier 1992; den Dikken 2003; van Craenenbroeck 2004). A phrase in Spec,CP₂ survives TP-ellipsis, but not CP₂-ellipsis. As the ellipsis site in English embedded clauses is CP₂, non-WH-remnants (i.e. FAs) in this context should be ill-formed. In root clauses and in Dutch, the clausal ellipsis site is (or can be) TP. Here, non-WH-remnants are predicted to be grammatical. Hence, the *WhSC* makes the correct predictions regarding the embeddability of FAs (and sluicing) in Dutch and English.

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Syntactic reconstruction and Scope Economy

Gary Thoms, University of Strathclyde

Reconstruction seems to be a non-unitary phenomenon: in some cases it is obligatory, in some others impossible, and sometimes it is even optional. This paper proposes that these patterns can be explained by an economy principle, Fox's (2000) Scope Economy, and general conditions on semantic interpretation at the syntax-semantics interface. The account does not need to stipulate distinctions between A and A' reconstruction, and it thus adds empirical weight to a unitary theory of movement such as the Copy Theory (Chomsky 1993).

UNINTERPRETABLE COPIES: here I argue that differences between A and A' chains with respect to reconstruction effects are due to differences between the landing sites for movement. First I show that, contrary to standard assumptions in the literature (e.g. Takahashi & Husley 2009, Fox 1999), wh-movement does not obligatorily leave a copy that is interpreted. This is demonstrated with examples of wh-movement that bleeds Condition C in English three-place verb constructions (2) that cannot be explained by Late adjunction (cf. the presence of the Cond C effect in 1). This is confirmed with similar data from Italian (and replicated for French); (3)-(4) demonstrate a contrast between questions with and without cliticized object pronouns, which suggests reconstruction must to be an intermediate position below TP and above the base position (t'_2) (also accounting for data like 1). I take this to be the edge of vP. This conclusion is further confirmed with English data from long movement (5; cf. Huang 1993), in which reconstruction to t''_2 and not the lower positions allows for alleviation of a Cond C effect.

Second, I show that some copies in wh-chains can never be interpreted. This is shown by pronoun binding data from English (6), where reconstruction to the base position is required for the QP *every professor* to bind the pronoun. That binding fails indicates that reconstruction to the base position is impossible in such constructions. This is confirmed by similar data from Norwegian (7)-(8) (and replicated for Danish): wh-questions containing the anaphoric possessive pronoun *sin*. *Sin* needs to be interpreted within the scope of its binder and can, for a subset of speakers, be bound by a non-subject; the contrast between (7) and (8) (for the relevant subset of speakers) thus indicates that reconstruction to the base position is impossible in these cases.

I argue that the impossibility of reconstruction to these base positions is due to the fact that whPs are quantifiers of type $\langle et, t \rangle$, and they are uninterpretable in their base positions within VP (and in Spec,CP) for semantic type reasons, just like other QPs in movement chains (Heim & Kratzer 1998). Such an approach also allows us to explain the fact that wh-predicates obligatorily reconstruct to the base position (cf. 11; Barss 1986): assuming that wh-predicates have the semantic type of ordinary predicates, $\langle e, t \rangle$, they would only be interpretable in the base position, so only this copy can be interpreted and thus reconstruction is obligatory. What these generalizations show is that A and A' chains are not, in fact, very different with respect to copy interpretation: rather, whether or not a given copy can be interpreted is often determined by general properties of semantic interpretation. With these generalizations in place, we are thus able to construct a unitary theory of syntactic reconstruction that follows from the Copy Theory of Movement.

RECONSTRUCTION AND SCOPE ECONOMY: here I address anti-reconstruction effects in A-chains and argue that they follow from economy principles. While trapping effects indicate that reconstruction feeds the binding theory (cf. 9; Fox 1999), data like (10) indicates that reconstruction does not always obtain to alleviate binding violations. (Lebeaux (2009) argues that such data indicates that Cond C applies throughout the derivation, but this cannot be maintained in view of (1)-(5).)

I argue that this is explained if we take syntactic reconstruction to be a Scope-Shifting Operation in Fox's (2000) terms (explicit in Fox₁1995): if reconstruction is constrained by Scope

Economy (12), it can only apply to scope-taking elements, i.e. QPs. Therefore A-reconstruction is not possible in (10) but is in (9). This also explains the availability of optional reconstruction for anaphor binding in wh-chains (13), given that whPs are quantificational.

WEAK CROSSOVER: this theory predicts that binding failures that obtain due to a lack of reconstruction should be alleviated if the (non-)reconstructing element is quantified. I argue that this prediction is borne out in the case of Weak Crossover. I follow Ruys (2000) in taking WCO to be a scope phenomenon, in that the binding violation occurs because the possessive pronoun is not within the scope of the binder. This is necessarily the case for standard examples (14) if we assume, with Johnson & Tomioka (1998) and others, that subject reconstruction is required to bring a subject DP within the scope of a QRd QP. It thus turns out that WCO is alleviated if the subject is quantificational (15) (cf. Merchant 2007). I then show that this trend holds for long A-chains, and that the standard contrast between raising and control remains (16)-(18). I argue that such data presents a strong argument for an analysis in which reconstruction is subject to Scope Economy.

DATA

- (1) *[Which of John's₁ friends]₂ did he₁ invite t₂?
- (2) [Which of John's₁ assignments]₂ did Mary t'₂ help him₁ with t₂?
- (3) [A quale degli amici di Giovanni]₂ hai t'₂ presentato lui₁ e Maria t₂?
to which-of-the friends of Giovanni have presented-2S him and Maria
Which of Giovanni's friends did you introduced him and Maria to?
- (4) *[A quale degli amici di Giovanni]₂ lo₁ hai t'₂ presentato t₂?
to which-of-the friends of Giovanni him did presented-2S
Which of Giovanni's friends have you introduced him to?
- (5) [Which of John's₁ friends]₂ do you t''₂ think he₁ will t'₂ invite t₂?
- (6) ??/*[Which of his₁ students]₂ did you t'₂ warn every professor₁ about t₂?
- (7) *[Hvilken av sine₁ stil]₂ har Mary hjulpet John₁ med t₂?
which of SELF'S essays has Mary helped John with
[Which of his₁ essays]₂ has Mary helped John₁ with?
- (8) Mary hjalp John₁ med sitt₁ hjemmearbeid.
Mary helped John with SELF'S homework.
Mary helped John₁ with his₁ homework
- (9) a. [At least one soldier] seems to Napoleon to be likely to die in every battle. $\forall > \exists$
b. [At least one soldier]₁ seems to himself₁ to be likely to die in every battle. $*\forall > \exists$
- (10) *[He₁]₂ seems to John's₁ mother t₂ to be great. (Lebeaux 2009)
- (11) [How proud of herself_{1/*2}]₃ did Barbara₂ t'₃ think that Alice₁ should be t₃?
- (12) Scope Economy: covert optional operations (i.e. QR and QL) cannot be scopally vacuous (i.e. they must reverse the relative scope of two noncommutative quantificational expressions). (Fox 2000: 75)
- (13) [Which pictures of himself_{1/2}]₃ did John₁ t''₃ say that Bill₂ t'₃ liked t₃? (Barss 1986)
- (14) *His₁ friends recommended [every candidate]₁.
- (15) At least two of his₁ friends recommended [every candidate]₁
- (16) [At least one of his₁ students]₂ is likely to t₂ recommend [every professor]₁ for tenure.
- (17) *His₁ students]₂ are likely to t₂ recommend [every professor]₁ for tenure.
- (18) *At least one of his₁ students wants PRO to recommend [every professor]₁ for tenure.

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Embedded Topics, Predication, and Judgment Theory

Satoshi Tomioka, University of Delaware

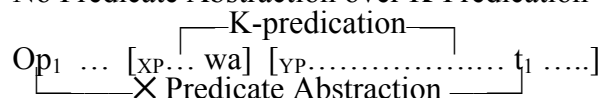
Background: While the topic marking with the particle *wa* is a prevalent phenomenon in Japanese, its appearances are highly restricted under embedding. Combining the previous observations by various authors (e.g., Kuroda 1992, 2005, Ueyama 2007, Heycock 2008, Hara 2006 among many others), Tomioka (2009) presents the descriptive generalization that embedded thematic *wa*-phrases are possible when the embedded clauses indicate, explicitly or implicitly, the presence of ‘point-of-view’ holders. He lists a variety of facts that support the generalization; (i) complement clauses of attitude verbs can have *wa*, (ii) *because* clauses show sensitivities to the Davidson’s ‘single causal statement’/‘causal explanation’ distinction (cf. Kratzer 1998), where the latter, but not the former, allows the topic marking, (iii) Ueyama’s (2007) observation that *wa* can be found in some conditional *if*-clauses (e.g., *no-nara*) but not in others (e.g., *-reba*, *-to*). The former type contains *-no-da* ‘it is that’, which indicates that the speaker is in the explanation mode (cf. Okuda 1990). However, there is one type of embedded clause that does not conform to the generalization; a relative clause shows a much stricter restriction on *wa*-phrases than expected. The key contrast is between (1ab) and (2ab), both of which involves CPs embedded within NPs.

- | | |
|--|--|
| <p>(1) a. [Kenji-✓<i>ga</i> /*<i>wa</i> kekkon-sita] uwasa
 K-nom/top married rumor
 ‘the rumor that Ken married.’</p> | <p>b. [Kenji-✓<i>ga</i> /✓<i>wa</i> kekkon-sita]-to iu uwasa
 K-nom/top married- rumor
 ‘the rumor that (says that) Ken married.’</p> |
| <p>(2) a. [Kenji-✓<i>ga</i> /*<i>wa</i> e katta] kuruma
 K-nom/top married car
 ‘the car that Ken bought.’</p> | <p>b. [Kenji-✓<i>ga</i> /*<i>wa</i> e katta]-to iu kuruma
 K-nom/top bought- car
 ‘the car that (it is said that) Ken bought.’</p> |

(1a) shows that a CP complement of an N ordinarily disallows *wa*, but adding a ‘point-of-view’ expression *-to-iu* ‘says that’ makes the topic marking possible, as shown in (1b). On the other hand, the same trick does not work for a relative clause. While *to-iu* can be added to a relative clause, the topic marking is still illicit, as shown in (2b). If the topic marking under embedding were just a matter of ‘point of view’, no contrast would be expected between the type types. What is the source of the tighter restriction on relative clauses?

Analysis: The crucial ingredient of my proposal is Kuroda’s (1992) theory of *wa*-marking. A sentence of the form *XP-wa YP* expresses a categorical judgment, and it represents the true predication relation (YP is the predicate, taking XP as its argument). Thus, ‘Predication exists only in a form of the object of a judgment, and not as a form of a proposition per se’ (Kuroda 1992: 67). I use the term *K(uroda)-Predication* in order to distinguish what Kuroda calls predication from the more conventional notion of predication. Let us now turn to the function of a relative clause. The process embodies a strategy of creating a predicate by Predicate Abstraction triggered either by the movement of a relative operator or the raising of a head noun (depending on one’s theoretical inclination). I propose a very straightforward constraint: No Predicate Abstraction is allowed over K-Predication (the schematization in (3)).

- (3) No Predicate Abstraction over K-Predication



The intuition behind this constraint is the following. K-predication is a truly ‘privileged’ predication relation, and its privilege cannot be undermined by Predicate Abstraction over it.

Since a CP complement of an N does not involve Predicate Abstraction, the *wa*-marking is allowed, as long as the ‘point of view’ requirement is satisfied.

Predictions: According to the current proposal, the ban on the *wa*-marking within relative clauses is not across-the-board but rather selective. As long as the abstraction process does not ‘cross over’ the *wa*-phrase, it should be allowed. This prediction is borne out. Consider (4ab).

- (4) a. [[Kenji-✓*ga* /**wa* e katta]-to Maki-ga omotte-iru] kuruma
 K-nom/top bought-Comp M-nom think-prog car
 ‘the car that Maki thinks that Kenji bought’
- b. [[Kenji-✓*ga* /✓*wa* sono-kuruma-o katta]-to e omotte-iru] hito
 K-nom/top that-car-acc bought-Comp think-prog person
 ‘the person who thinks that Kenji bought that car’

In both (4a) and (4b), the presence of the attitude verb *omou* ‘think’ creates an environment suitable for *wa*. In (4a), however, the abstraction is over the embedded object and therefore crosses over the embedded subject with *wa*, which creates the very configuration depicted in (3). Therefore, (4a) disallows the *wa*-marking on the subject. In (4b), on the other hand, what is abstracted is the subject of the attitude verb *omou*, and this movement does not cross the embedded subject. Hence, the use of *wa* of the embedded subject is permitted. Second, not all relative clause formations involve Predicate Abstraction. Non-restrictive/ appositive relative clauses are propositional (rather than properties) and do not involve Predicate Abstraction. Then, it is predicted that, as long as the ‘point-of-view’ is clearly indicated within a non-restrictive relative clause, *wa* can appear in it. The contrast shown below confirms this prediction: With the evidential marker *dearou*, the embedded subject can bear *wa*.

- (5) a. [Katute-naku seihu-✓*ga* /???*wa* taioo-ni kurou-site-iru] nikkoo-mondai
 in.the.past-neg government-nom/top cope-dat have trouble-prog JAL- problem
 ‘the problem of the Japan Airlines, which the government is having more trouble coping with than ever.’
- b. [Korekara-mo seihu-✓*ga* /✓*wa* taioo-ni kurou-suru-**dearou**] nikkoo-mondai
 from now-also government-nom/top cope-dat have trouble-**evid** JAL-problem
 ‘the problem of the Japan Airlines, which (it is predicted) the government will continue having trouble coping with.’

Implications: The stricter restriction on relative clauses is due to its special syntax and semantics (the creation of a predicate by abstraction). Hence, it does not threaten the overall generalization about embedded topics (i.e., the presence of a ‘point of view’ holder). (3) may also have some bearing on the well-known ‘widest scope’ property of a sentence topic. If (3) also applies to such operations as QR, it is predicted that topics take the widest scope possible. The current analysis strongly suggests that the *wa/ga* distinction does not directly reflect the new information/old information partition but rather comes from different judgment forms, as Kuroda claims, or different speech act structures, as proposed by Jacob (1983), Krifka (2001) and Endriss (2009).

The measure and comparison of events

Alexis Wellwood, Valentine Hacquard, Roumyana Pancheva

The plurality requirement on ‘more’. Hackl (2001) proposes that in nominal comparatives (e.g., *more girls*), the comparative determiner must range over pluralities. This view is conceptually attractive, since it provides for a uniform treatment of nominal and adjectival comparatives: all incorporate measure functions that relate individuals and degrees in a non-trivial, order-preserving way (von Stechow 1984, Kennedy 1999, a.o.). In nominal comparatives this is possible when the NP argument denotes sums as opposed to simply atomic individuals, which would all be trivially mapped to a degree of one. Hackl’s empirical support for the plurality requirement is the fact that *more*’s NP argument is obligatorily plural marked in English, which he interprets (following Link 1983) as a pluralizing operator. However, it has been repeatedly challenged that this number morphology tracks semantic plurality, since in many cases plural marked NPs allow reference to singular entities (Krifka 1989, 1995; Schein 1993; Sauerland, Andersen, & Yatsushiro 2005; Borer 2005, a.o.). Hackl avoids this problem by including atomic individuals in his plural denotations (departing from Link 1983).

However, the notion that plural marking is semantically vacuous, simply a matter of morphosyntactic agreement (particularly with numerals, cf. Krifka 1995), is more problematic. In this paper we provide more concrete evidence for a (semantically) contentful plurality requirement on comparatives. First, we observe that Bulgarian (like Finnish) differentially marks NPs with numerals and NPs with *more*.

(1)

<i>osem stola</i>	* <i>osem stolove</i>	<i>poveče stolove</i>	* <i>poveče stola</i>
eight chair-pl1	eight chair-pl2	more chair-pl2	more chair-pl1
‘eight chairs’		‘more chairs’	

This is evidence that the plural marking on NP arguments to *more* may not simply be the kind of agreement marking found with numerals. We find more concrete evidence for Hackl’s requirement by turning to adverbial comparatives.

Telicity, aspect, and comparison. We take the count/mass distinction in the nominal domain to parallel the telic/atelic distinction in the verbal domain (following e.g. Mourelatos 1978; Hoepelman & Rohrer 1980; Bach 1986; Krifka 1989; Borer 2005), and the distinction between singular/plural NPs to correspond to a difference in viewpoint aspect: perfective describes singular events (which may be quantified over by adverbials like *always*, yielding multiple events), and imperfective describes plural events (under its habitual interpretation; cf. Ferreira, 2005). In particular, atelic VPs like *run in the park* are *cumulative*: the whole may denote a plurality of running events, each subevent of which also satisfies the predicate. Telic VPs like *run to the park* (on a non-iterative interpretation), however, are *quantized*: if this event has subparts, they do not themselves count as instances of the whole. In English, adverbial *more* is incompatible with telic and I-level predicates, as well as with VPs demanding a group agent:

(2)

<i>telic</i> :	#Girls ran to the park more than boys did
<i>atelic</i> :	Girls ran in the park more than boys did
<i>I-level</i> :	#Girls are intelligent more than boys are
<i>S-level</i> :	Girls are available more than boys are
+ <i>coll</i> :	#Girls formed a circle more than boys did
± <i>coll</i> :	Girls formed circles more than boys did

In Bulgarian, which overtly marks perfective/imperfective aspect, adverbial *more* is grammatical only when both event descriptions are marked imperfective:

- (3) a. *Ivan hodeše na teatâr poveče otkolkoto Maria hodeše*
 Ivan go-impf.past to theatre more than Maria go-impf.pst
 ‘Ivan’s theatre-goings were more numerous than Maria’s’
- b. **Ivan hodeše na teatâr poveče otkolkoto Maria otide*
 Ivan go-impf.past to theatre more than Maria go-pfv.past
- c. **Ivan otide na teatâr poveče otkolkoto Maria hodeše*
 Ivan go-pfv.past to theatre more than Maria go-impf.pst
- d. **Ivan otide na teatâr poveče otkolkoto Maria otide*
 Ivan go-pfv.past to theatre more than Maria go-pfv.past

Parallels between nominal/verbal comparatives extends to the types of measurement they support.

Constraints on measure. Bale and Barner (2009) argue that the measure of plural count NPs (e.g. *beers*) is in terms of cardinality, whereas the measure of mass NPs (e.g. *beer*) is along some other dimension, e.g. volume. We see the same pattern in the verbal domain with singular and plural atelic predicates, e.g. *sleep+pfv* and *sleep+impfv*, respectively. Suppose that, when Mary and John were in college, Mary slept 3 times a day for 3 hours each, for a total of 9 hours per day. John, on the other hand, slept in 2 shifts of 5 hours each, for a total of 10 hours per day. Here, Mary’s sleeping events are more numerous than John’s, but the temporal duration of John’s (summed) sleeping events is greater than Mary’s. In this scenario, Spanish (4a) can be judged true, whereas (4b) is judged false.

- (4) a. (*En la universidad,*) *María dormía más que Juan*
 (In college,) Mary sleep-past-impfv more than John
 ‘In college, Mary’s sleepings were more numerous than John’s’
- b. (*En la universidad,*) *María durmió más que Juan*
 (In college,) Mary sleep-past-pfv more than John

(4a) can be true since comparison by number of events is possible; curiously, in this case a comparison by duration is also allowed, which is unexpected given that atelics with perfective aspect are predicted to be comparable in terms of cardinality alone. But as (4b) is judged false, we see that comparison along a dimension other than number (duration in this case) is forced, as predicted.

Characterizing the constraint. It appears that part of the meaning of the comparative is a non-trivial mapping of entities to degrees on some quantity scale, whether in terms of cardinality or some other dimension. We consider whether the patterns we observe in verbal comparatives with *more* reflect a general constraint on measurement systems in natural language (cf. Krifka 1989, Schwarzschild 2002), and, in particular, to what extent Hackl’s ‘plurality’ requirement reflects constraints of the same sort as those identified for psuedopartitive formation (Schwarzschild 2002), split NPs in Japanese (Nakanishi 2007), constructions with verbal additive *more* (Greenberg 2009), and quantification at a distance in French (Burnett 2009). In all of these cases, predicates of a ‘singular count’ variety are ruled out, while mass-like and plural-count-like predicates are acceptable.

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Island Sensitivity of Contrastive Focus in Sluicing: Evidence for Focus Phrase Movement

Susanne Winkler (University of Tübingen)

This paper argues that Contrastive Focus in ellipsis is island sensitive. Although generally true, there seem to be some exceptions to this hypothesis in English. Recent theories of the variable island repair phenomenon (Lasnik 2001, Merchant 2001, 2008) have focused on the puzzle that wh-extraction out of a relative clause island seems to be possible where sluicing applies, but not in other ellipses. The theoretical assumption in PF-deletion accounts is that the offending trace in sluicing is deleted at PF.

The relevant island configuration, which Ross (1969) first noticed for English, can also be found for German as in (1). However, an initial pilot study showed that variable island repair seems to be marked in German. The observation is that the German fully spelt out versions are ungrammatical due to standard island constraints as in (1a). The sluicing examples with the extraction out of the relative clause are still highly marked (1b, c). The only fully grammatical cases are the sluicing examples where the wh-remnant refers to the matrix clause antecedent, as in (1d).

- (1) Sie wollen (nur) einen Linguisten, der eine Balkansprache spricht, einstellen
 theywant (only) a linguist who a Balkan language speaks hire
 aberich weiss nicht,
 but I know not
- a. *welche_i sie einstellen wollen, der t_i spricht.
 which they hire want who speaks
- b. *welche_i [~~sie einstellen wollen, der t_i spricht~~].
 which they hire want who speaks
- c. ??welche_i [~~er t_i spricht~~].
 which he speaks
- d. √wen_i [~~sie t_i einstellen wollen~~].
 who_{acc} they hire want

The main claim is that extraction out of sluicing interacts with focus assignment in the antecedent clause. First, I will introduce Kifka's (2006) *Association with Focus Phrase* theory (AwFP-theory). Then I will apply it to a nonelliptical example and to sluicing in German. I will show that the AwFP theory can explain the ungrammaticality of (1a, b) and the grammaticality of (1d). The crucial question, however, is: why is (1c) accepted by some speakers. The answer lies in the interaction of extraction with focus and processing.

The AwFP-theory constitutes a hybrid theory which combines the strong syntactic approach of *association with focus* (e.g. Chomsky 1976, Drubig 1994) and the semantic approach (Rooth 1985, 1992, Kratzer 1991). The main idea of the AwFP-theory is given in (2):

- (2) Association with Focus Phrase (AwFP)

Association with focus phrase is via LF movement, association of focus within focus phrases is via projection of alternatives. (Krifka 2006: 105)

The relevant configuration for the AwFP-theory is given in (3). (3a) shows that the configuration is grammatical if the focus sensitive operator (fso) is associated with the focus phrase (FP), and ungrammatical if it is associated with the contrastive focus (F_i) as in (3b) (details will be filled in as I proceed).

- (3) a. fso_{FP} [...[...F_i...]_F]_{FP-island}
 b. *fso_i [...[...F_i...]_F]_{FP-island}

A nonelliptical example pair is given in example (4a, b). Capitalization is used to mark the location of the sentence accent. Square brackets with subscripts signal the F and the FP.

- (4) a. They only hired [the woman who spoke [SALish]_F]_{FP} but they didn't (hire) [the woman who spoke [ALBANian]_F]_{FP}.
 b. *They only hired [the woman who spoke SALish] but they didn't (hire) [ALBANian]_F.

The fso of the first conjunct in (4a, b) is *only*, the fso of the second conjunct is *but*. The claim is that the fso *only* in (4a) is associated with the complete FP *the woman who spoke SALish* in the first conjunct and not only with the F *SALish* within the relative clause island. Observing parallelism, the fso *but* in the second conjunct is again associated with the complete FP *the woman who spoke ALBANian* and not only with the focus *ALBANian*. Example (4b) is ungrammatical because the fso *but* in the second conjunct is associated only with the F *ALBANian* and not with the FP *the woman who spoke ALBANian*.

I will propose that the violation of the AwFP-requirement in (2) accounts for the markedness of the extraction data not only in (4), but also in sluicing cases as in (1), repeated in (5) and (6) with different focus accents. The proposal involves three claims: i. contrastive focus is island sensitive; ii. association with focus (AwF) occurs between the fso and the complete FP, and not between the fso and the focused lexical element inside the FP. iii. the island reading can be facilitated by associating the fso with the contrastive focus inside the relative clause, but processing costs result. I will provide syntactic and information structural arguments to support these claims.

The crucial cases are (5) and (6). (5) corresponds to (3a), (6) to (3b). Thus, in (5), the fso *nur* (only) associates with the accented head of the FP (relative clause) *Linguisten*. In (6), the fso associates with the indefinite DP within the FP.

- (5) Sie wollen nur [[einen LINGUISTEN]_F, der eine Balkansprache spricht]_{FP} einstellen,
 aberich weiss nicht, a. √wen b. *welche
 (6) Sie wollen nur [[einen Linguisten, der [eine BALKANSPRACHE]_F spricht]_{FP} einstellen,
 aberich weiss nicht, a. √wen b. */??welche

In (5), the b-continuation is unavailable. The prediction is that the b-reading should be equally unavailable in (6). Native speaker judgments show that the continuation in (6a) is preferred, but that (6b) is not completely ungrammatical.

The main theoretical challenge is to explain the subtle markedness difference on the basis of the AwFP-theory and processing considerations. It seems that in those instances in which speakers accept extractions out of islands under sluicing, accommodation processes apply. These processes change the size of the FP and shift the focus of attention to the embedded relative clause. These attention shifting processes increase the processing load. The semantic difference is illustrated by the possibility to interpret (6b) as (1c) *welche er spricht* and not as (1b) *welche sie einstellen wollen, der spricht*. The difference might appear small, but it is crucial from a semantic perspective. Example (1b) can be paraphrased as *for which x does it hold that they want to hire someone who speaks x?* This question establishes the alternatives over the FP *they want to hire someone who speaks Albanian, they want to hire someone who speaks Armenian*, etc. However, the question meaning of (1c) is *for which x does it hold that he speaks x?*, which establishes the alternatives over the FP *he speaks Albanian, he speaks Armenian*, etc. The accommodation of the FP to the interpretation of (1c) makes the sluicing cases better than regular island violations but still unacceptable.

The main empirical challenge is to develop a testing tool which separates out the grammaticality judgement of the resulting structure and its corresponding interpretation, so that the results can be compared to previous findings on processing and information structure in ellipsis (cf. Carlson et al. 2008, Frazier 2009, Konietzko et al. 2009). An online processing study based on a uni-modal naming task is presently being carried out. Initial results will be presented if conclusive.

On the recursivity of focus intonation in Japanese: Wh-foci in embedded contexts

Background: Wh-phrases in Japanese are arguably specified for focus features in the lexicon and realized invariably with focus prosody, the focal F0 boost on the Wh-phrase and the post-focal reduction (i.e. suppression of the pitch accents of the following words until their scope markers). The post-focal reduction applies to another Wh-phrase too: In (1), the embedded Wh-phrase *nani* ‘what’ is in the post-focal reduction domain (underlined) of the matrix Wh-phrase *dare* ‘who’. Its focal F0 boost is much lower than an embedded Wh-phrase that is not in the post-focal reduction domain. This is known as the Second Occurrence Focus (SOF) phenomenon in Japanese (Ishihara 2003, Kitagawa 2007). **Theory:** Ishihara’s (2003) syntax-phonology mapping model assigns a phonological metrical grid representation to a syntactic structure shipped by phase-by-phase Multiple Spell-Out (Chomsky 2000, 2001a,b). In his mechanism, the embedded Wh-phrase in (1) exhibits the SOF effect because it is *linearly* embedded in the post-focal reduction domain of the matrix Wh-phrase, as widely observed. In addition, the SOF effect in his theory is also attributed to *hierarchical* configuration that forces the matrix Wh-phrase to project the highest grid mark, rendering the grid line of the embedded Wh-phrase non-highest. **Prediction:** When the embedded Wh-phrase is taken out of the post-focal reduction domain of the matrix Wh-phrase as in (2), the linear configuration of SOF realization is removed. However, the hierarchical configuration remains the same, thus Ishihara’s theory still predicts that the SOF effect is observed on the embedded Wh-phrase. Based on a pilot experiment, we designed a production experiment to test this prediction for each individual subject.

Experiment: 14 native Tokyo Japanese speakers were presented question&answer pairs, one at a time on a computer screen and asked to read them aloud for recording. Three types of the sentences schematically shown in (3) were prepared. The differences were made clear to the subjects by presenting corresponding answers and letting them read the question&answer pairs before each recording. Six sets of the three conditions mixed with 12 fillers were used in six repetition sessions with different pseudo-randomized orders; total 36 tokens were obtained for each condition per subject. The prediction is recapitulated in this experiment schema in (4). **Result:** The peak F0 values of each word were measured, labeled as in (3), and used for the t-test within subject. First, the P2 is significantly higher in condition I, II than in III for almost all the subjects (12 out of 14 subjects). The Wh-phrases are phonologically interpreted as focus and they receive the focal F0 boost regardless of their scope, as predicted by Ishihara (2003). As for the SOF effect, the subjects were divided into two groups each represented by a subject in (5). Five subjects distinguished P2 across the conditions as predicted by Ishihara (2003), while six subjects did not make such a distinction between condition I and II. The theory makes a correct prediction for half of the subjects, but not for the other half.

Discussion: Some subjects like RA (“Global”) manipulated the prosodic realization of P2 considering that of the matrix Wh. Other subjects like AK (“Local”) reached the upper limit of their pitch range when they prosodically realized the focused P2 without looking-ahead to the matrix Wh (cf. Wagner 2005). That this “Global” vs. “Local” view is on the right track can be inferred by a hypothetical sentence form in (6). In (6), one has to anticipate three more Wh-phrases coming at the point of the most deeply embedded CP in order to conform to the phonological representation that Ishihara (2003) predicts. It is reasonable to assume that one must give up such a global prosodic computation at some point. We believe this difference in the point at which one gives up the global computation has led to the experimental finding reported above: The “Local” group gave up with one embedding, while the “Global” group tried to stay in conformity with the phonological grid representation. In conclusion, the prosodic realization of the syntactic structure is based on Ishihara’s (2003) mechanism with a variation of the neutralization point for the global computation, rather than positing two entirely different grammars that would divide the subjects into two groups.

(1) Dare-ga [Mari-ga **nani-o** nomiya-de nonda **ka**]imademo oboeteru no?
 who-N_{OM} [Mari-N_{OM} **what-A_{CC}** bar-L_{OC} drank **Q**] even.now remember Q
 ‘Who still remembers what₁ Mari drank t₁ at the bar?’ (Ishihara 2003, (11))

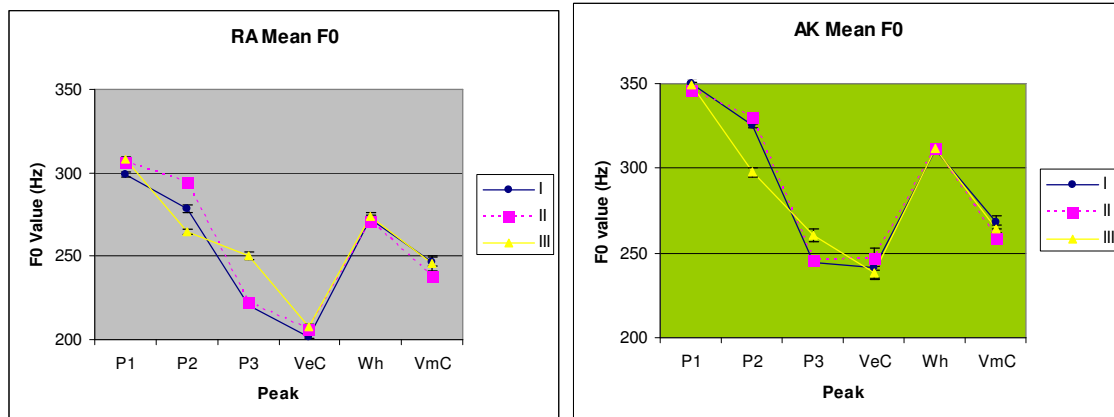
(2) [Naoto-ga **nani-ni** naifu-o nageta **ka**] **dare-ni** itta no?
 [Naoto-N_{OM} what-to knife-A_{CC} threw **Q**] **who-to** said Q
 ‘To whom did you tell what Naoto threw a knife at?’

(Note: The embedded CP is either base generated or undergone a VP-internal scrambling. Thus it is not subject to the focalization that long-distant scrambled object tends to receive.)

(3) Words:[NP₁ NP₂ NP₃ V COMP] Wh V Q? (All lexically accented)
 Labels:P1 P2 P3 V_{emb} Wh V_{mat}
 I. [... Wh_{emb} ... Q] Wh ... Q?
 Wh-question that embeds an indirect question, as exemplified by (2).
 II. [... Wh_{mat} ... C] Wh ... Q?
 Multiple Wh-question making a minimal pair with the condition I with respect to the scope of the embedded Wh-phrase signaled by the different embedded complementizers.
 III. [... NP ... C] Wh ... Q?
 Control sentence with a non-Wh-phrase replacing the embedded Wh-phrases of I, II.

(4) Predictions: i) P2 in I and II > P2 in III (Focal Boost)
 ii) P2 in I < P2 in II (Scope/Phase Sensitive Focal Boost)

(5) Representatives of each group (The error bars are the standard errors)



The subjects represented by the left chart: (All $p < 0.001$; FM $t(35)=3.7204$, KM $t(35)=2.774$, NS $t(35)=8.1604$, RA $t(35)=5.5388$, TE $t(35)=3.9490$)

The subjects represented by the right chart: (All $p > 0.05$; AK $t(35)=2.0155$, MO $t(35)=1.5325$, MT $t(35)=0.3067$, YM $t(35)=0.1994$, YS $t(35)=1.0563$, YS2 $t(35)=0.3874$)

Note: These 11 subjects were picked and three were excluded for the ease of the presentation, as the prosodic status of the matrix Wh-phrase was constant across conditions for the former group, while it was not for the latter.

(6) [CP...[CP[CP[CP...Wh...Q]...Wh...Q]...Wh...Q]...Wh...Q] (Extension of Condition I)

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**A Typology of Compensatory Lengthening:
A Phonetically-based Optimality Theoretic Approach**
Suyeon Yun (Seoul National University)

This study aims to provide an adequate description of universal patterns of Compensatory Lengthening (CL) and a formal account of both universal and language-specific CL patterns within the framework of Optimality Theory (OT; Prince and Smolensky 2004). Several interesting asymmetries have been found and analyzed in the previous studies on CL. The most well-known one is that the deletion of postvocalic *codas* is likely to trigger CL, whereas the deletion of prevocalic *onsets* never does; this is based on moraic theory (Hayes 1989), which assumes that only codas, not onsets, are potential bearers of moras. Another asymmetry is that the deletion of *sonorants* is likely to trigger CL, whereas the deletion of *obstruents* never does, since vowels are usually longer only when adjacent to sonorants, not obstruents, which might be reinterpreted as phonologically long (Kavitskaya 2002).

To determine the universal patterns of CL while checking the validity of these asymmetries, I conducted a typological survey of 137 languages showing CL. Results, summarized in (1) and (2), show that the asymmetries in CL are not absolute.

(1) Cross-linguistic patterns of CL classified by the position of CL triggers

CL trigger		number of lgs	examples
coda	onset		
O	O	13	Arabic (Classical), Maltese, Onondaga, Supyire, Turkana
O	X	21	Turkish, Farsi, Latin, Diegueño, Gbeya
--	O	15	Greek (Samothraki), Baasaar, Gyoore, Anywa
O	--	88	Komi (Ižma), Latvian, Lithuanian, Kabardian
X	O	0	none

(2) Cross-linguistic patterns of CL classified by the sonority of CL triggers

CL trigger		number of lgs	examples
sonorant	obstruent		
O	O	23	Ngamo (Gudi), Hindi, Piro, Tibetan (Lhasa), Anywa
O	X	10	Yurok, Farsi, Greek (Ancient), Kasem, Supyire
--	O	5	Thai, Natchez, Baasaar, Alabama, Ambialet Occitan
O	--	99	Komi (Ižma), Latvian, Lithuanian, Kisi, Kabardian
X	O	0	none

(O = attested; X = unattested; -- = no deletion)

Note that CL through onset loss is attested in 28 languages, with various trigger consonants, including Samothraki Greek as in (3), and CL through obstruent loss in 28 languages including Lhasa Tibetan as in (4).

(3) CL in Samothraki Greek (Topintzi 2006)

/ruxa/ [u:xa] ‘clothes’
/krató/ [ka:to] ‘I hold’

(4) CL in Lhasa Tibetan (Dawson 1980)

/tsik/ [tsik] ~ [tsi:] ‘one’
/kəpki/ [kəpki] ~ [kə:ki] ‘will do, make’

Nonetheless, it is still true that CL through coda and sonorant loss is attested in a majority of languages, 122 and 132 respectively. Based on these survey results, I suggest that the asymmetries of the previous studies should be replaced with the implicational relationships in (5). Notice that implicational relationships of this type are hardly accommodated within most previous analyses of CL in which absolute universals are assumed.

(5) Implicational relationships in CL typology

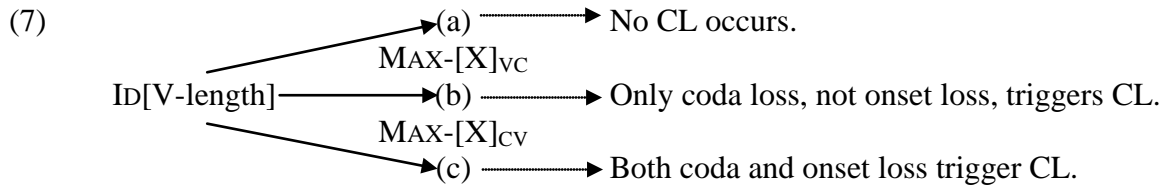
- a. If the deletion of prevocalic *onsets* triggers CL, so does the deletion of postvocalic *codas*, but not vice versa.
- b. If the deletion of *obstruents* triggers CL, so does the deletion of *sonorants*, but not vice versa.

For an adequate OT analysis of the implicational relationships of CL typology, I propose sets of faithfulness constraints and their universal rankings in (6). Specifically, adopting X as the timing unit, I provide constraints for the sequences involving coda and onset ($\text{MAX}[\text{X}]_{\text{VC}}$ and $\text{MAX}[\text{X}]_{\text{CV}}$), and those involving sonorant and obstruent ($\text{MAX}[\text{X}]_{\text{V//[+SON]}}$ and $\text{MAX}[\text{X}]_{\text{V//[−SON]}}$). The coda-onset asymmetry is explained by the fixed ranking between $\text{MAX}[\text{X}]_{\text{VC}}$ and $\text{MAX}[\text{X}]_{\text{CV}}$ (6a), and the sonorant-obstruent asymmetry by the fixed ranking between $\text{MAX}[\text{X}]_{\text{V//[+SON]}}$ and $\text{MAX}[\text{X}]_{\text{V//[−SON]}}$ (6b).

(6) Universal rankings of faithfulness constraints for the sequence duration

- a. $\text{MAX}[\text{X}]_{\text{VC}} \gg \text{MAX}[\text{X}]_{\text{CV}}$
- b. $\text{MAX}[\text{X}]_{\text{V//[+SON]}} \gg \text{MAX}[\text{X}]_{\text{V//[−SON]}}$

Also, language-specific patterns of CL can be analyzed in terms of variable interactions between the proposed faithfulness constraints and $\text{ID}[\text{V-length}]$ prohibiting the change of input vowel length, as shown in (7). To be specific, both onset and coda deletion would trigger CL (e.g., Classical Arabic), if both $\text{MAX}[\text{X}]_{\text{VC}}$ and $\text{MAX}[\text{X}]_{\text{CV}}$ outrank $\text{ID}[\text{V-length}]$ as in (7c). When $\text{ID}[\text{V-length}]$ is ranked in-between as in (7b), only the coda deletion triggers CL but onset deletion does not (e.g., Turkish). No CL occurs when $\text{ID}[\text{V-length}]$ is topmost ranked as in (7a). My proposal correctly predicts the absence of the pattern in which the loss of onsets exclusively triggers CL. The sonorant-obstruent asymmetry can be analyzed in a similar way by the interaction of the constraints in (6b) and $\text{ID}[\text{V-length}]$.



The proposed fixed rankings are crucially based on the P-map theory (Steriade 2009) in which perceptually drastic modifications are avoided, and thus faithfulness constraints prohibiting perceptually prominent change should invariably outrank those prohibiting less prominent change. Several different sources (Goedemans 1998, Goldstein et al. 2006, Kavitskaya 2002) suggest that duration change involved in the deletion of codas and sonorants would be perceived as more drastic than that of onsets and obstruents. For instance, Goedemans' (1998) perception experiments somewhat directly show that humans are more sensitive to the duration shift of codas and sonorants than that of onsets and obstruents. Reflecting this relative perceptibility, the rankings in (6) are universally fixed, which may in turn explain the implicational relationships of CL patterns in (5).

This proposal agrees with moraic approaches, but disagrees with Kavitskaya (2002), in that CL is considered a conservative process of the duration of the deleted segment. However, to explain CL through onset loss which causes serious problems to moraic approaches, I adopt X as a unit of segment duration, following Gordon (2006), so that onsets bear timing units reassociated to the neighboring vowel after the loss of the onset melody. Another advantage of this proposal over mora-based, especially OT, approaches in which moras are assigned to codas through Weight-By-Position, is that the current proposal is not subject to opacity problem since all input segments have Xs.

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There is Only One Way to Agree

Hedde Zeijlstra, University of Amsterdam, zeijlstra@uva.nl

1. Current minimalism takes syntactic operations Agree and Move to be triggered by underlying feature checking requirements (Chomsky (1995, 2000, 2001), Pesetsky & Torrego (2004, 2007)). Agree is said to be a relation between a probe α and a goal β , such that (i) α and β are in a proper local domain; (ii) α has some uninterpretable feature [uF]; (iii) β has a matching interpretable feature [iF]; (iv) α c-commands β ; and (v) there is no matching active goal in between α and β , where a goal is said to be active if it carries an additional uninterpretable feature. Move is said to be the result of an additional [EPP] feature on the probe, which makes the goal move to a position, where it immediately c-commands the probe (mostly a specifier position of the probe's XP). In this paper I argue this notion of Agree/Move faces several problems that are avoided once a simpler version of the feature checking relation underlying these operations is adopted, which in some way is the mirror image of Bošković (2007) proposal. **2.** This standard version of Agree/Move suffers from at least five problems. (i) it does not explain cases existence of Reverse Agree; (ii) it does not explain cases of Multiple Agree; (iii) it does not explain cases of Concord phenomena; (iv) it does not explain the triggering of intermediate steps in successive cyclic movement; and (v), the [EPP] features itself remains unmotivated. Ad (i): Reverse Agree, as in (1) is problematic as it does not follow from anything why the interpretable [iT] feature on T may be checked against lower [uT] on DP. Previously, it has been assumed that this Reverse Agree is a by-effect of the Agree relation between [u Φ] and [i Φ], but as Pesetsky and Torrego (2007) have pointed out, the dependency of tense Agree on Φ Agree has remained unexplained and actually faces severe problems. Ad (ii), cases of Multiple Agree, such as (2)-(3) do not follow either. In these cases Ura (1996) and Hiraiwa (2001) have argued that Japanese allows three nominative DP's have their case features checked against a single T° in the matrix clause. However, for the probe, there is no reason why it should expend the Agree relation into lower clauses as its own features already have been checked after establishing an Agree relation with the highest DP. Apparently, it is a property of goal rather than the probe that Multiple Agree must take place. Ad (iii), many concord phenomena, such as Negative Concord, only show Agree relation between an element carrying an interpretable feature and one or more uninterpretable features, where the interpretable feature c-commands the uninterpretable one, as illustrated in (4) (see Zeijlstra (2004) for many more examples). Here the Agree relation is completely reverse to what is standardly assumed. Ad (iv), under phase-based a models where subordinate CP's are completed before they are merged with matrix verbs, triggering of successive cyclic movement is a problem, since current theories, as Bošković (2007) has pointed out, cannot properly explain what motivates movement of a subordinate *wh*-element to subordinate Spec,CP. The problem lies in the fact that if movement is triggered in order to satisfy properties of matrix C°, it is unclear what triggers the first steps of movement, which take place before matrix C° is even part of the derivation (see (5)). Ad (v), the reason for movement, the [EPP] feature, which must be thought of as some particular type of uninterpretable feature, finally lacks independent motivation: at best, it is a stipulative notion that is used to make the system work. **3.** In recent years, two proposals have been put forward that try to overcome some of these problems. Pesetsky and Torrego (2007) have argued that reverse Agree may take place in situations where the probe is interpretable but unvalued, thus disentangling Chomsky's (2000, 2001) notions on unvaluedness and uninterpretability. This may then account for cases of ReverseAgree, such as (1), where T carries an unvalued, interpretable [iT] feature that gets valued during the course of the derivation. Pesetsky and Torrego's analysis can be expended to the facts concerning Multiple Agree by assuming that T carries again an unvalued [iT] and that DP's have unvalued [uT] features. Valuation of tense should then come from the finite verb in matrix clause. However, Pesetsky and Torrego (2007) cannot account for the attested observations concerning

Concord Phenomena. In (4) there is no reason at all to assume that the negative force of *non* would be in need of a value. In fact, Zeijlstra (2004) has shown that Italian *non* as well as other negative operators themselves are both valued and interpretable. Hence, the disentangling of unvaluedness and uninterpretability cannot correctly explain cases where interpretable elements c-command uninterpretable ones, one of the original motivations for this approach in the first case. Note that Pesetsky and Torrego (2007) do not propose a solution to the remaining problems, as they are only focused on the unvaluedness/uninterpretability distinction. Bošković (2007) focuses on the other two problems and argues that many problems related to successive cyclic movement disappear, once it is assumed that no uninterpretable feature may be checked against a higher interpretable feature and that such a configuration will inevitably lead to movement. Hence, in (5), it is [uQ] on DP, which encodes that it cannot survive in situ after completion of the lower CP and will therefore move to its spec position, hoping to find a higher element carrying [iQ] that it may move across and have been checked. As such successive cyclic movement receives explanation and it dismisses the [EPP] feature of the highest head: it is [uQ] on the *wh*-element that drives movement. However, under such a model it is problematic to account for multiple *wh* in a single clause: why is that *what* in (6) must move, but *who* may remain in situ? **4.** In this paper I argue that all problems disappear once a simpler version of Agree is adopted: Agree is a relation between a probe α and a goal β , such that (i) α and β are in a proper local domain; (ii) α has some uninterpretable feature [uF]; (iii) β has a matching interpretable feature [iF]; (iv) α is **c-commanded** by β ; and (v) there is no matching goal carrying [iF] in between α and β . As can be observed directly, all problematic cases of Reverse Agree, Multiple Agree and Concord Phenomena are resolved. Tense agreement is a relation between [iT] and [uT] on the verb and on the subject DP. Only in languages where T carries [u ϕ], subjects move across T, thus accounting for the crosslinguistic distribution of pre- and postverbal subjects, something which is problematic for Bošković (2007) as he acknowledges himself. Multiple Agree follows as well, as it is [uT] on the subject DP's in (2)-(3) that need to be c-commanded by the first c-commanding element carrying [iT]. Now the DP's are probing, not T. The cases of Concord also naturally follow as (4) is completely in compliance with the new version of Agree. Finally, successive cyclic movement is explained better than in Bošković (2007), since both the pattern in (5) follows (it is [uQ] that must move to the next phase in order to survive and it is [iWH] that must front across matrix C° to have its [uWH] checked), and cases like (6), since [uWH] on matrix C° must be c-commanded by just one element carrying [iWH]. Finally, all these cases of movement can still be motivated without alluding to [EPP]. Thus the simpler version of Agree actually diminishes a number of notorious problems concerning the notion of feature checking, while still being able to account for the facts that the Agree proposal initially has been proposed for, including long distance-Agree between finite verbs and lower DPs, such as (7), where the expletive-DP relation is thought to be an instance of movement where the expletive is the result of partial spell out of the higher copy (much alike Barbier's et al (2009) analysis for *Wh* doubling).

- (1) [T T[iT][u ϕ] [vP DP[uT][i ϕ]]]
- (2) John-**ga** [yosouijouni nihonjin-**ga** eigo-**ga** hidoku] kanji-ta. Japanese
 John.NOM than.expected the.Japanese.NOM English.NOM bad.INF thought
 'It seemed to John that the Japanese are worse at speaking English than he'd expected.'
- (3) [T° DP [DP [DP]]]
 [u ϕ] [i ϕ] [i ϕ] [i ϕ]
 [iT] [uT] [uT] [uT]
- (4) Non[iNEG] ha detto niente[uNEG] a nessunouiNEG Italian
 NEG has said nothing to nobody 'She didn't say anything to anybody'
- (5) [CP DP[iWH][uQ] C°[uWH][iQ][EPP] ... [CP <DP[iWH][uQ]> ... <DP[iWH][uQ]>]]
- (6) [CP What [iWH][uQ] [C°did [uWH][iQ][EPP]] you buy from whom[iWH][uQ]]
- (7) There seems to have arrived a student