



Berkeley Linguistics Society  
40<sup>th</sup> Annual Meeting  
Berkeley, California  
February 7-9, 2014



# Contents

Acknowledgments .....	iii
Schedule .....	1
Plenary Speakers .....	6
Papers .....	14
Conference Venue .....	59
Restaurants, Cafes, Bars, Copy Shops, & Bookstores .....	60

## Plenary Speakers

Gorka Elordieta .....	7
<i>Minimal and Non-minimal Phonological Phrases in Basque</i>	
Martina Faller .....	8
<i>Reportativity, (Non-)at-issueness and Assertion</i>	
Vera Griбанова .....	9
<i>Nonconcatenative Exponence and the Russian Derived Imperfective</i>	
Kira Hall .....	10
<i>Accidental Modernity: English, Sexuality, and Humor in Delhi's Globalized Middle Class</i>	
Jason Kandybowicz .....	11
<i>The Prosodic Licensing of Wh-in-situ: Evidence from Four Tano Languages</i>	
Lisa Matthewson .....	12
<i>What Natural Language Disjunction Is: Evidence from St'át'imcets, Gitksan and Tlingit</i>	
Wendy Sandler .....	13
<i>Embodied Prosody</i>	

## Papers

Brian Agbayani & Masao Ochi ....	15
<i>The Split Lexical Insertion Hypothesis</i>	
Calixto Agüero Bautista .....	16
<i>Weak Crossover and the Syntax-phonology Interface</i>	
Lynette Arnold .....	17
<i>Transidiomatic Practices and the Hierarchical Organization of Spatiotemporal Scales in Transnational Salvadoran Families</i>	

Rebekah Baglini .....	18
<i>States across lexical categories</i>	
M. Ryan Bochnak & Peter Klecha ..	19
<i>Vagueness and context-dependence in Luganda temporal remoteness morphemes</i>	
Joseph Brooks .....	20
<i>Split paths in the same domain: The polygrammaticalization of mi- in Chini</i>	
Sunghye Cho .....	21
<i>The High-on [il] in Seoul Korean: a lexical diffusion or a phonological rule?</i>	
Jessica Cleary-Kemp .....	22
<i>Irrealis as verbal non-specificity in Koro (Oceanic)</i>	
Oana David .....	23
<i>Subjectification, constructionalization and clitic doubling: A view from Romance</i>	
Andrew Dombrowski .....	24
<i>Mechanisms and Chronology of Vowel Harmony Loss in West Rumelian Turkish</i>	
Erin Donnelly .....	25
<i>Network effects on phonological variation in a Mesoamerican language</i>	
Francisco José Fernández Rubiera ..	26
<i>When phonology undergenerates: Evidence from Asturian enclitic structures</i>	
Kathryn Franich .....	27
<i>Contour Tones and Prosodic Structure in Medumba</i>	
Michelle Fullwood .....	28
<i>Asymmetric Correlations Between English Verb Transitivity and Stress</i>	
Hugo García .....	29
<i>Mirative Meanings and Their Grammaticalization Sources</i>	
Ager Gondra Astigarraga .....	30
<i>Micro-variation within Bizkaiera Basque: Evidence from RCs</i>	
Bill Haddican & Arantzazu Elordieta	31
<i>Intervention and clause type sensitivity in Basque</i>	
Bill Haddican, Anders Holmberg & Nanna Haug Hilton .....	32
<i>Staying in shape in Norway</i>	
Mayumi Hosono .....	33
<i>Scandinavian Object Shift: The Inter-</i>	

<i>face Between Syntax, Phonology and Information Structure</i>	Anne Pycha .....	48
Yu-Yin Hsu .....	<i>Subjective perception of affixation: A test case from Spanish</i>	
<i>The Unit Phrase in Mandarin</i>	Laura Robinson & František Kratochvíl .....	49
Gwendolyn Hyslop .....	<i>Reconstructing Alignment: The Timor-Alor-Pantar (Papuan) family</i>	
<i>On the category of interlocutor expectation in Kurtöp</i>	William Salmon .....	50
Siva Kalyan & Alex François .....	<i>Encoding Contrast, Inviting Disapproval: The Place of ata in Belizean Kriol</i>	
<i>Historical Glottometry: A wave-model approach to subgrouping</i>	William Salmon & Jennifer Gómez Menjívar .....	51
Shinae Kang & Keith Johnson .....	<i>Whose Kriol is Moa Beta? Prestige and Dialects of Kriol in Belize</i>	
<i>Audiovisual perceptual salience of stop consonant clusters and two perceptual accounts in stop place assimilation</i>	Scott Seyfarth, Farrell Ackerman & Rob Malouf .....	52
Niamh Kelly, Megan Crowhurst Cobb .....	<i>Implicative organization facilitates morphological learning</i>	
<i>The effect of duration and glottalization on the perception of rhythm</i>	Scott Seyfarth & Mark Myslín .....	53
Maria Konoshenko .....	<i>Discriminative learning predicts human recognition of English blend sources</i>	
<i>The syntax of tone in Guinean Kpelle</i>	Jessica Slavic & Hugo Salgado .....	54
Maria Kyriakaki .....	<i>The Phonetics of Rare Sounds: Production and Perception of Aspirated Fricatives in Sgaw Karen</i>	
<i>Three Degrees of Definiteness</i>	John Sullivan & Justyna Olko .....	55
Kathleen Langr .....	<i>Toward a Comprehensive Model for Nahuatl Language Research and Revitalization</i>	
<i>Possessive Structures as Evidence for DP in West Greenlandic</i>	Adam Tallman .....	56
Vera Lee-Schoenfeld & Gabriele Diewald .....	<i>The prosody of split and glued verb constructions in Chácobo (Pano)</i>	
<i>The Pragmatics and Syntax of German Inalienable Possession Constructions</i>	Jos Tellings .....	57
Ryo Masuda .....	<i>‘Only’ and focus in Imbabura Quichua</i>	
<i>Revisiting the phonology and morphosyntax of Chechen and Ingush verb doubling</i>	Jozina Vander Klok & Rose-Marie Déchaine .....	58
Ryo Masuda & Theodore Levin .....	<i>Stative vs. Eventive predicates and vP-internal structure</i>	
<i>Case and Agreement in Cupeño: Morphology Obscures a Simple Syntax</i>		
Beata Moskal .....		
<i>The role of morphological markedness in exclusive/inclusive pronouns</i>		
Lisa Pearl, Timothy Ho, & Zephyr Detrano .....		
<i>More learnable than thou? Testing metrical phonology representations with child-directed speech</i>		
Stephen Peters .....		
<i>The rhetorics of urban Aboriginal place-making: Studying Aboriginal and non-Aboriginal relationship building in the intercultural speaking event</i>		



# Acknowledgments

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The BLS40 Executive Committee gives thanks to our volunteers, chairs, and the faculty. We would also like to extend special thanks to our plenary speakers and to everyone who has made the trip to present their work.

## BLS40 Executive Committee

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# Berkeley Linguistics Society 40th Annual Meeting Schedule

Friday, February 7, 2014

3:00 Coffee & Registration  
371 Dwinelle

3:55 Opening Remarks  
SPEAKER: Andrew Garrett  
370 Dwinelle

## **Language, Inequality, and Globalization**

CHAIR: Erin Donnelly  
370 Dwinelle

4:00 LYNETTE ARNOLD (UCSB), *Transidiomatic Practices and the Hierarchical Organization of Spatiotemporal Scales in Transnational Salvadoran Families*

4:30 STEPHEN PETERS (McGill), *The rhetorics of urban Aboriginal place-making: Studying Aboriginal and non-Aboriginal relationship building in the intercultural speaking event*

5:00 WILLIAM SALMON & JENNIFER GÓMEZ MENJÍVAR (U. of Minnesota, Duluth), *Whose Kriol is Moa Beta? Prestige and Dialects of Kriol in Belize*

5:30 JOHN SULLIVAN & JUSTYNA OLKO (IDIEZ & U. of Warsaw), *Toward a Comprehensive Model for Nahuatl Language Research and Revitalization*

6:00 KIRA HALL (University of Colorado, Boulder)  
*Accidental Modernity: English, Sexuality, and Humor in Delhi's Globalized Middle Class*

CHAIR: Mara Green  
370 Dwinelle

7:00 Wine & Cheese Reception  
371 Dwinelle

# Saturday, February 8, 2014

8:30

Coffee, Breakfast, & Registration  
371 Dwinelle

## Syntax-phonology Interface I

CHAIR: Tammy Stark  
370 Dwinelle

## Experimental Morphology

CHAIR: Clara Cohen  
3335 Dwinelle

9:00

ADAM TALLMAN (UT), *The prosody of split and glued verb constructions in Chácobo (Pano)*

BILL HADDICAN, ANDERS HOLMBERG & NANNA HAUG HILTON (CUNY-Queens College, Newcastle U. & U. of Groningen), *Staying in shape in Norway*

9:30

FRANCISCO JOSÉ FERNÁNDEZ RUBIERA (Central Florida), *When phonology undergenerates: Evidence from Asturian enclitic structures*

ANNE PYCHA (U. of Wisconsin, Milwaukee), *Subjective perception of affixation: A test case from Spanish*

10:00

RYO MASUDA (MIT), *Revisiting the phonology and morphosyntax of Chechen and Ingush verb doubling*

SCOTT SEYFARTH, FARRELL ACKERMAN (UCSD) & ROB MALOUF (SDSU), *Implicative organization facilitates morphological learning*

10:30

MARIA KONOSHENKO (Sholokhov Moscow State U.), *The syntax of tone in Guinean Kpelle*

SCOTT SEYFARTH & MARK MYSLÍN (UCSD), *Discriminative learning predicts human recognition of English blend sources*

11:00

Break  
371 Dwinelle

11:15

JASON KANDYBOWICZ (University of Kansas)  
*The Prosodic Licensing of Wh-in-situ: Evidence from Four Tano Languages*

CHAIR: Peter Jenks  
370 Dwinelle

12:15

Lunch

1:15

VERA GRIBANOVA (Stanford University)  
*Nonconcatenative Exponence and the Russian Derived Imperfective*

CHAIR: Line Mikkelsen  
370 Dwinelle

2:15

Break  
371 Dwinelle

## Syntax-phonology Interface II

CHAIR: Line Mikkelsen

370 Dwinelle

## Phonetics

CHAIR: Susan Lin

3335 Dwinelle

2:20 YU-YIN HSU (Bard College), *The Unit Phrase in Mandarin*

SHINAE KANG & KEITH JOHNSON (Berkeley), *Audiovisual perceptual salience of stop consonant clusters and two perceptual accounts in stop place assimilation*

2:50 MAYUMI HOSONO (Leiden), *Scandinavian Object Shift: The Interface Between Syntax, Phonology and Information Structure*

JESSICA SLAVIC & HUGO SALGADO (UNC), *The Phonetics of Rare Sounds: Production and Perception of Aspirated Fricatives in Sgaw Karen*

3:20 CALIXTO AGÜERO BAUTISTA (U. du Québec à Trois-Rivières), *Weak Crossover and the Syntax-phonology Interface*

NIAMH KELLY, MEGAN CROWHURST & CRYSTAL COBB (UT), *The effect of duration and glottalization on the perception of rhythm*

3:50

Break  
371 Dwinelle

3:55

WENDY SANDLER (University of Haifa)  
*Embodied Prosody*

CHAIR: Eve Sweetser  
370 Dwinelle

4:55

Break  
371 Dwinelle

## Morphosyntax

CHAIR: Peter Jenks

370 Dwinelle

## Pragmatics

CHAIR: Matt Goss

3335 Dwinelle

5:00 RYO MASUDA & THEODORE LEVIN (MIT), *Case and Agreement in Cupeño: Morphology Obscures a Simple Syntax*

VERA LEE-SCHOENFELD & GABRIELE DIEWALD (Georgia & Leibniz U. Hannover), *The Pragmatics and Syntax of German Inalienable Possession Constructions*

5:30 BEATA MOSKAL (Connecticut), *The role of morphological markedness in exclusive/inclusive pronouns*

OANA DAVID (Berkeley), *Subjectification, constructionalization and clitic doubling: A view from Romance*

6:00 KATHLEEN LANGR (Washington), *Possessive Structures as Evidence for DP in West Greenlandic*

HUGO GARCÍA (UNM), *Mirative Meanings and Their Grammaticalization Sources*

6:30	MARIA KYRIAKAKI (Toronto), <i>Three Degrees of Definiteness</i>	WILLIAM SALMON (U. of Minnesota, Duluth), <i>Encoding Contrast, Inviting Disapproval: The Place of ata in Belizean Kriol</i>
7:00	Break 371 Dwinelle	
7:30	Banquet 370 Dwinelle	

## Sunday, February 9, 2014

8:30	Coffee, Breakfast, & Registration 371 Dwinelle
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**Syntax I**  
CHAIR: Nico Baier  
370 Dwinelle

**Historical Linguistics**  
CHAIR: Chundra Cathcart  
3335 Dwinelle

9:00	BRIAN AGBAYANI & MASAO OCHI (CSU Fresno & Osaka U.), <i>The Split Lexical Insertion Hypothesis</i>	LAURA ROBINSON & FRANTIŠEK KRATOCHVÍL (UCSB & Nanyang Technological U.), <i>Reconstructing Alignment: The Timor-Alor-Pantar (Papuan) family</i>
9:30	JOZINA VANDER KLOK & ROSE-MARIE DÉCHAINÉ (UBC), <i>Stative vs. Eventive predicates and vP-internal structure</i>	SIVA KALYAN & ALEX FRANÇOIS (Northumbria U. & CNRS LaCiTO), <i>Historical Glottometry: A wave-model approach to subgrouping</i>
10:00	AGER GONDRA ASTIGARRAGA (SUNY Purchase), <i>Micro-variation within Bizkaiera Basque: Evidence from RCs</i>	ANDREW DOMBROWSKI (Chicago), <i>Mechanisms and Chronology of Vowel Harmony Loss in West Rumelian Turkish</i>
10:30	BILL HADDICAN & ARANTZAZU ELORDIETA (CUNY-Queens College & U. of the Basque Country), <i>Intervention and clause type sensitivity in Basque</i>	JOSEPH BROOKS (UCSB), <i>Split paths in the same domain: The polygrammaticalization of mi- in Chini</i>

11:00	Break 371 Dwinelle
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11:15	GORKA ELORDIETA (University of the Basque Country) <i>Minimal and Non-minimal Phonological Phrases in Basque</i> CHAIR: Larry Hyman 370 Dwinelle
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12:15

Lunch

1:15

LISA MATTHEWSON (University of British Columbia)  
*What Natural Language Disjunction Is: Evidence from St'át'imcets, Gitksan and Tlingit*  
CHAIR: Ryan Bochnak  
370 Dwinelle

2:15

Break  
371 Dwinelle

**Semantic Theory in Underdescribed Langs.**

CHAIR: Elise Stickles  
370 Dwinelle

**Phonology**

CHAIR: Matt Faytak  
3335 Dwinelle

2:20

JESSICA CLEARY-KEMP (Berkeley), *Ir-realis as verbal non-specificity in Koro (Oceanic)*

KATHRYN FRANICH (Chicago), *Contour Tones and Prosodic Structure in Medumba*

2:50

REBEKAH BAGLINI (Chicago), *States across lexical categories*

MICHELLE FULLWOOD (MIT), *Asymmetric Correlations Between English Verb Transitivity and Stress*

3:20

GWENDOLYN HYSLOP (ANU), *On the category of interlocutor expectation in Kurtöp*

ERIN DONNELLY (Berkeley), *Network effects on phonological variation in a Mesoamerican language*

3:50

M. RYAN BOCHNAK & PETER KLECHA (Berkeley & OSU), *Vagueness and context-dependence in Luganda temporal remoteness morphemes*

SUNGHYE CHO (Penn), *The High-on [il] in Seoul Korean: a lexical diffusion or a phonological rule?*

4:20

JOS TELLINGS (UCLA), *'Only' and focus in Imbabura Quichua*

LISA PEARL, TIMOTHY HO & ZEPHYR DETRANO (UC Irvine), *More learnable than thou? Testing metrical phonology representations with child-directed speech*

4:50

Break  
371 Dwinelle

5:00

MARTINA FALLER (University of Manchester)  
*Reportativity, (Non-)at-issueness and Assertion*  
CHAIR: Lev Michael  
370 Dwinelle

6:00

Closing Remarks  
370 Dwinelle

## Plenary Speakers

## Minimal and Non-minimal Phonological Phrases in Basque

In this talk, I will show that the distribution of upstep on phonological phrases in the variety of Basque spoken in the Northern Bizkaian variety of Lekeitio cannot be accounted for under previous analyses that claim that upstep occurs at the left edge of an intonational constituent known as Intermediate Phrase, with the assumption that the left edges of syntactic phrases project edges of Intermediate Phrases (cf. Elordieta 1997, 1998 *et seq.*). An ongoing study of upstep in Lekeitio Basque shows that there are syntactic phrases within complex DPs which do not show upstep at their left edge, such as single-noun NPs preceded by DPs in a specifier position, in contrast with NPs associated to an Adjective Phrase, which do show upstep at their left edge. The proposal will be that the difference can be explained by assuming minimal and non-minimal phonological phrases in prosodic phonology, a distinction based on dominance of prosodic constituents of the same kind (cf. Ito & Mester 2007, 2009, 2013, Selkirk 2011 and Elfner 2012). It will be argued that upstep applies at the left edge of a non-minimal phonological phrase ( $\Phi_{\text{nonmin}}$ ), and that the cases where upstep does not occur are instances of minimal phonological phrases ( $\Phi_{\text{min}}$ ). This proposal will lead to an interesting conclusion on the issue of verb rising in Basque, as single-word DP objects immediately preceding the verb are upstepped. The conclusion will be that in order for those DPs to constitute  $\Phi_{\text{nonmins}}$  it needs to be assumed that the verb does not raise to the head of TP and rather stays in the same or a lower projection than the DP object.



## **Reportativity, (Non-)at-issueness and Assertion**

There are currently three types of analyses available for grammatical evidentials, each of which treats evidentiality as a type of non-at-issue meaning: (i) as modals with an evidential presupposition, (ii) as conventional implicatures (CI) and (iii) as speech act modifiers. In this talk I will argue that these analyses are not all mutually exclusive, at least not in principle. Since speech act meaning is a grammatical level of meaning rather than a way of conveying meaning, it is possible for an element to be operating at this level and to contribute a presupposition or a conventional implicature. Indeed, Potts' (2005) analysis of utterance modifiers such as *frankly*, which he subsumes under the CI umbrella, treats them as speech act elements. Recent proposals of analyzing evidentials as CIs might therefore be compatible with Faller's (2002) analysis of Quechua evidentials as illocutionary modifiers. However, through a case study of the Quechua Reportative, I will argue that despite this element sharing essential properties with CIs, existing CI analyses of evidentials cannot account for it. In particular, these analyses cannot account for the fact that declarative sentences with the Reportative are not assertions but still contribute at-issue content. I will refine the speech act analysis of this element proposed in Faller (2002) using ideas from Farkas and Bruce (2010) about how propositions are added to the common ground. More generally, I will suggest that there is nothing to be gained from including speech act elements under the CI umbrella.

## Nonconcatenative Exponence and the Russian Derived Imperfective

In this talk I implement an approach to two morphosyntactically triggered phonological processes, both related to the Russian derived imperfective (DI). The canonical realization of the DI — which makes prefixed, perfective verbs (1,3,5) into imperfectives — is suffixal (2). However, in the case of certain verbs the DI suffix is accompanied by vowel mutation in the root (4), and in certain others the only reflection of DI features is the realization of a vowel in the root of the verb (6).

- |     |  |     |  |     |   |
|-----|--|-----|--|-----|---|
| (1) | za-bol'-e-t'<br>PFX-hurt-TH-INF<br>'to fall ill' (PFV)                             | (3) | za-moroz-i-t'<br>PFX-freeze-TH-INF<br>'to freeze (sth.)'<br>(PFV)                          | (5) | razo-sl-a-t'<br>apart-send-TH-INF<br>'send out' (PFV)           |
| (2) | za-bol'-e- <b>v</b> -a-t'<br>PFX-hurt- <i>v</i> -DI-TH-INF<br>'to fall ill' (IMPF) | (4) | za-mora <b>ž</b> - <b>iv</b> -a-t'<br>PFX-freeze-DI-TH-INF<br>'to freeze (sth.)'<br>(IMPF) | (6) | ras- <b>syl</b> -a-t'<br>apart-send-TH-INF<br>'send out' (IMPF) |

In a realizational theory like Distributed Morphology (DM), these interactions have been dealt with through the application of readjustment rules: phonological rules which apply in a listed set of morphosyntactic environments, after the matching of morphosyntactic features to their corresponding phonological exponents (Vocabulary Insertion, in DM). These rules have often been the source of concern for their unrestrictedness and potential to weaken the predictive power of DM (Siddiqi 2006, 2009; Bye & Svenonius 2012; Haugen & Siddiqi 2013). To the extent that morphophonological analyses can eventually do away with readjustment rules, or at least significantly limit their power, the benefit to DM is apparent: it would become both more restrictive and more convincing.

I present evidence for a morphosyntactic structure corresponding to the parses in (1)–(6), establishing along the way that the DI morpheme exhibits inwardly sensitive allomorphy to class features associated with the root. This allomorphy is structurally local, in the way current formulations of Vocabulary Insertion (Embick 2010) lead us to expect. I then propose, following (Bye & Svenonius 2012) (among many others) and building on (Griбанова to appear), that the non-local phonological effects observed in (4) and (6) are best accounted for if morphosyntactic features like the DI can be realized directly via the insertion of autosegmental material, sometimes in addition to segmental material. Cases like (6) involve the insertion of a floating mora, whereas cases like (4) involve the insertion of a suffix along with phonological features which force a change in the closest root vowel. I take an Optimality Theoretic approach to the modeling of the resulting effects, with an eye toward answering two questions: first, for a given autosegmental feature, what dictates what a legitimate docking site may be for it? Second, if there is more than one legitimate docking site, what kind of locality condition dictates where these features are realized? I conclude with a discussion of empirical zones where we expect readjustment rules and the approach outlined here to make significantly different predictions.

Kira Hall  
*University of Colorado, Boulder*

## **Accidental Modernity: English, Sexuality, and Humor in Delhi's Globalized Middle Class**

This paper forms part of a larger project that examines how Hindi and English, along with a range of hybrid language varieties situated between these two extremes, inform the emergence of new forms of sexual subjectivity arising in and around India's capital, New Delhi. English has long been viewed as a carrier of Western values, but the rise of India's new global economy has worked to sediment its status as a language of modernity, and more specifically, of sexual modernity. Drawing from conversational data collected during two fieldwork visits to Delhi in 2008 and 2009, this paper explores this sedimentation as it materializes in the everyday joking routines of middle class women who see themselves as sexual moderns. The jokes analyzed here problematically support a dominant narrative of progress that temporalizes urban subjectivities as more advanced than others. Yet the women who tell them, all of whom share highly marginalized positions in contemporary India as queer subjects, also restructure this narrative by positioning themselves at its forefront. Their humor plays on the longstanding caricature of the naive Sikh (heterosexual) man, the "Sardar Ji," who lacks the social grooming to understand forms of English associated with modernity: He is only *accidentally* modern, reproducing the forms of modernity without understanding the meaning of this production. Sexual knowledge thus becomes the teleological trump to sexual practice, and its linguistic prerequisite is English.

Jason Kandybowicz  
*University of Kansas*

## **The Prosodic Licensing of *Wh*-in-situ: Evidence from Four Tano Languages**

This talk investigates the interrogative syntax of four Tano languages of Ghana (Krachi, Bono, Wasa, and Asante Twi), focusing on *wh*-in-situ. Each language reveals a challenging set of distributional puzzles as well as a considerable degree of micro parametric variation. I argue that prosodic licensing is a crucial dimension regulating the distribution of *wh*- in-situ in the Tano languages. While considerations at the syntax-semantics interface surely play an equally prominent role in the licensing of certain in-situ interrogatives both in Tano and cross-linguistically, I restrict my attention in this talk to cases where syntactic and semantic considerations appear immaterial in the licensing of *wh*-in-situ. My claim is that *wh*-items are subject to a prosodic licensing condition requiring them to be internal to Intonational Phrase at spell-out. Under this analysis, the ability of a *wh*-item to appear in an in-situ position correlates with the prosodic status of its immediately containing clause. Because the prosodic status of clauses can vary from language to language, it becomes possible to reduce the micro-variation in *wh*-in-situ observed in these four languages to a difference in how their syntactic structures are externalized at PF by way of prosodic mapping.

## What Natural Language Disjunction Is: Evidence from St'át'imcets, Gitksan and Tlingit

According to most introductory semantics textbooks, the English word *or* corresponds to logical disjunction, and is therefore an operation of set union:  $p \text{ or } q$  is true in all worlds in which  $p$ ,  $q$ , or both of them are true. In recent years, many researchers have proposed instead that *or* introduces sets of alternative propositions. On this more recent view,  $p \text{ or } q$  introduces (at least) the set of alternative propositions  $\{p, q\}$ . Variants of this idea have been proposed by Zimmermann (2000), Aloni (2003), Alonso-Ovalle (2004, 2006), Geurts (2005), Simons (2005), Groenendijk and Roelofson (2009), Slade (2011), Ciardelli et al. (2013), and Davidson (2013).

This recent and productive line of research has just one disadvantage: it is based almost exclusively on data from English. The primary goal of this talk is to inject some novel cross-linguistic data into the debate. The data come from three unrelated languages indigenous to the Pacific Northwest Coast of North America: St'át'imcets (Salish), Gitksan (Tsimshianic) and Tlingit (Na-Dene). I argue that these three languages provide support for the alternatives analysis of disjunction. In Gitksan for example, disjunctions obligatorily contain an element *ligi*, which appears in a range of disparate constructions, all of which share the semantics of alternatives. Furthermore, St'át'imcets and Tlingit specifically support an analysis of disjunction as involving modal semantics (as proposed by Zimmermann, Aloni, Geurts and Simons). In these two languages, disjunctions involve concatenated clauses introduced by explicit epistemic modals (the equivalent of *possibly p*, *possibly q*). The one systematic set of exceptions to this pattern involve threats (*Either you eat your meat, or you don't get dessert*), which have a different semantics and are predictably rendered by conditionals (*If you don't eat your meat, you don't get dessert*).

Wendy Sandler  
*University of Haifa*

## **Embodied Prosody**

Research over the past half century has achieved success in convincing linguists that sign languages are fully fledged languages in every sense of the word, manifesting many universal properties. This success has led to the view that the quintessential properties of language transcend the physical modality in which it is embodied, and that the latter is somehow of lesser importance than more abstract organizing principles. I will suggest that assuming this view leads us away from important insights about language and its origins.

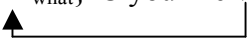
Sign languages offer us two advantages in our attempts to understand the role of prosody in language, both of which will be addressed in this talk. First, the prosodic system is distributed over several articulators and directly perceivable by the eyes, making it quite accessible for analysis. Second, sign languages can be born de novo, allowing us to discern which properties are indispensable and arise first, and offering the possibility of disentangling closely related phenomena such as prosody and syntax.

Data from a young sign language that arose in relative isolation, Al-Sayyid Bedouin Sign Language, show that prosodic structure arises gradually in the language, without overt syntactic marking. I will argue based on these data that prosody provides a scaffold for syntax, and not the other way around.

# Papers

# The Split Lexical Insertion Hypothesis

We provide a novel empirical argument for the Move F theory (Chomsky 1995), which Chomsky (2000) rejected (in favor of Agree) on purely conceptual grounds. Move F dictates that a lexical item LI splits up the formal features (FF) and the rest of the category under movement:

- (1) a. {FF<sub>what</sub>}-C you file what (Move F)
- 

Once the target/probe attracts the formal features (FF) of LI, the remnant category left behind—consisting of the semantic and phonological features of LI—becomes defective for PF (Lasnik 2001). This deficiency drives subsequent movement of the remnant category to ensure lexical integrity at PF. *We extend the feature splitting hypothesis to lexical insertion*, whereby LI is split up and its subparts are externally merged into distinct syntactic positions, in a parallel fashion. We apply this split lexical insertion hypothesis to Parasitic Gaps (PG). The derivation for (2) takes *what* and splits FF from the rest of the category (CAT) at the point of lexical insertion: The former is merged with *reading* whereas the latter is merged with *file* (3). After the main clause and adjunct clause are merged, interrogative C attracts the *wh*-feature (4). This feature attraction obeys locality as the *wh*-feature of *what* is the closest relevant feature for the probe; Move F, however, is not sensitive to the adjunct condition (Agbayani 1998; Ochi 1999). The defective CAT<sub>what</sub> raises overtly to ensure integrity at PF (5), creating the antecedent of PG.

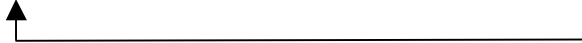
- (2) What did you file *e* without reading *e*?

- (3) Parallel derivation

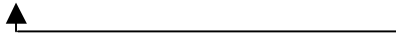
{reading, FF<sub>what</sub>}

{file CAT<sub>what</sub>}

- (4) FF<sub>what</sub>-C you file CAT<sub>what</sub> [without reading <FF<sub>what</sub>>]



- (5) CAT<sub>what</sub> {FF<sub>what</sub>}-C you file <CAT<sub>what</sub>> [without reading <FF<sub>what</sub>>]



The analysis provides insights into several otherwise mysterious properties of PGs; we outline two particularly important properties here. Our ‘PG = FF’ analysis potentially explains Postal’s (1993) observation that PG behaves like a weak pronoun, failing to occur in anti-pronominal contexts (6); we assume with Aoun and Nunes (2007) that FF and the pronoun, both lacking semantic features, count as essentially equivalent for the computational system.

- (6) a. Blake painted his house green/\*it.  
b. What color did they paint their house *e* (after criticizing *e*)?  
c. \*What color did they criticize *t* after painting their house *e*?

Second, the well-known ‘S-structure requirement’ is straightforwardly captured. Assuming that the interrogative C in English attracts only one *wh*-feature, (7b) is excluded as FF of *what* remains in-situ; consequently, CAT of *what* cannot remedy PF defectiveness in overt syntax (8).

- (7) a. What did you file *t* without reading *e*?

- b. \*Who filed what without reading *e*?

- (8) [who C [TP <who> filed CAT<sub>what</sub> [without reading FF<sub>what</sub>]]]

Importantly, in contrast to the sideward movement approach of PGs in Nunes (2001), our model predicts the inherent asymmetry between the real and parasitic gap positions, whereas sideward movement posits identical copies in the two positions, despite asymmetries between the two gaps.

The split lexical insertion approach helps us gain a deeper understanding of how the computational system manipulates syntactic objects. Most importantly, it provides a strong empirical argument for choosing the Move F theory over Chomsky’s Agree-based approach.



## Weak Crossover and The Syntax-Phonology Interface.

**The problem:** No theory of weak crossover (WCO) can account for the contrast in (1)-(2). Inside the subject constituent of the same relative clause, the Spanish pronoun *su* ‘his’ does not trigger a WCO violation, but *él* ‘him’ does.

(1) Ningun niño<sub>i</sub> [a quien<sub>i</sub> su<sub>i</sub> madre maltrate t<sub>i</sub>] será aceptado sin examen  
*No child<sub>i</sub> to whom<sub>i</sub> his<sub>i</sub> mother mistreats will-be accepted without exam*  
*psicológico.*  
*psychological.*

(2) Ningun niño<sub>i</sub> [a quien<sub>i</sub> la madre de él<sub>\*i/j</sub> maltrate t<sub>i</sub>] será aceptado sin  
*No child<sub>i</sub> to whom<sub>i</sub> the mother of him<sub>\*i/j</sub> mistreat will-be accepted without*  
*examen psicológico*  
*exam psychological*

### (3) Some derivational steps for the sentence *Which man does his mother love?*

- a. Merge (<which, man>), Merge (<he, man>)
- b. [Which man does he ~~man~~’s mother love ~~which-man~~]

**Proposal:** I argue that in the bound-variable interpretation of a determiner pronoun, the NP complement of the pronoun is a copy of the NP part of the antecedent that binds it. The copy of the antecedent NP is merged with the pronoun before any strong phase head is merged in a process similar to sideward movement (Nuñez 2001) or parallel merge (Citko 2005). For instance the derivation of *Which man<sub>i</sub> does his<sub>i</sub> mother love t<sub>i</sub> ?* can go through the stage in (3a) in which *Merge* applies in parallel to the pairs <which, man> and <he, man> before merging the phase head corresponding to *love*, hence no violation of cyclicity or the extension condition ensues. Since the NP part of the pronominal DP is a copy of the NP of the antecedent DP, a PF-interface strategy will delete the complement of the pronoun in order to avoid a potential violation of Kayne’s 1994 LCA (cf. Citko 2005), when the chains are finally linearized. This is shown in (3b) (deleted copies indicated with strikethrough font). But although the complement of the determiner pronoun in (3b) is deleted, its  $\phi$ -features are spelled-out in the phonological realization of the pronoun. This entails that  $\phi$ -features of the NP of the antecedent DP are phonologically realized in two different syntactic positions: at the site of the antecedent and at the site of the pronoun. I argue that the phonology sees such a situation as a violation of the LCA, but that the violation is only detectable by the phonology if the pronoun is spelled out in the same cycle as one of the copies of the antecedent (cf. Agüero-Bautista 2012). I argue that that is what WCO is. The difference between *su* and *él* above follows from their different categorial status. *Él* is a determiner, but *su* is a possessive adjective (Picallo and Rigau 1999). In realizing, phonetically, the  $\phi$ -features of its antecedent’s NP, pronunciation of *él* will lead to a violation of the LCA. A similar analysis is impossible for pronouns of the category of nouns or adjectives, like *su*, since such categories do not take NPs as complements. Thus, no part of the antecedent is merged with such pro-forms, hence there’s no potential violation of the LCA in such cases. Besides explaining the classical WCO data, the analysis can explain a number of puzzling data (e.g. the PRO-gate phenomena) without positing any principle specific to binding.

## Transidiomatic Practices and the Hierarchical Organization of Spatiotemporal Scales in Transnational Salvadoran Families

Mobility, the movement of people and their linguistic and cultural repertoires, has presented new challenges to sociolinguistic theory as the field endeavors to understand the nature of language under globalization (Besnier 2007, Coupland 2003, 2010, Fairclough 2006, Pennycook 2012). Blommaert (2003, 2010) has proposed *scale* as a productive metaphor for conceptualizing the hierarchically layered communicative contexts across which language flows. Because these scales are organized in fundamentally stratified ways, this framework places power and inequality at the heart of our approach to sociolinguistic life (Blommaert & Dong 2010). In this paper, I work to concretize the metaphor of scale by using it to understand communicative practices in one particular globalized context: transnational families living stretched between El Salvador and the United States. Such a focused application and close analysis demonstrate how scales emerge and are hierarchically organized through complex and at times conflicting interactional processes.

Drawing on three years of ethnographic fieldwork in both El Salvador and the United States, this paper analyzes video recordings of spontaneous conversations of transnational Salvadoran families. To maintain connection during their prolonged separation, these families develop nuanced *transidiomatic practices* (Jacquemet 2005) through which their affective and material ties are deterritorialized and reterritorialized. For example, deriving from the important role of face-to-face greetings in maintaining social ties in rural Salvadoran communities (cf. Irvine 1975), these transnational families use *saludos* (greetings) to bracket electronically-mediated interactions on the phone or online. Sometimes families even produce videos of such *saludos* to send to their distant relatives, as in the following example where Camila, a young woman in El Salvador, sends a greeting to her migrant brother, Patricio, and his family, in the United States.

- |    |          |   |  |
|----|----------|---|--|
| 1. | Camila:  | Hola ~Patricio. (0.3)                           | <i>Hello ~Patricio.</i>                        |
| 2. |          | Espero te encuentres bien. (1.3)                | <i>I hope that you are well.</i>               |
| 3. |          | Y:, (0.5) deseándote que estés alenta:do, (1.1) | <i>And hoping that you are in good health,</i> |
| 4. |          | está alentado la niña, (0.5)                    | <i>that your daughter is in good health,</i>   |
| 5. | Rosario: | Feliz la boda. (0.5)                            | <i>Happy wedding.</i>                          |
| 6. | Camila:  | ~Marlene también. (1.9)                         | <i>~Marlene as well.</i>                       |
| 7. |          | Y: que:, (0.7) seas feliz en tu bo:da,          | <i>And that you are happy in your wedding,</i> |
| 8. |          | que te (.) salga todo bien,                     | <i>that everything turns out well,</i>         |
| 9. |          | así como (.) lo esperas,                        | <i>just like you want it to,</i>               |

In this example, the identification of far-flung relatives (lines 1, 4, 6) recognizes a *distant scale* of family life in the United States, while simultaneously constituting an interconnecting *transnational scale* through the articulation of affective involvement in these distant relatives' lives (lines 3, 7-9). This affective involvement is negotiated in the *immediate scale*, as Camila's mother Rosario reminds her of Patricio's upcoming wedding (line 5). Thus, through this mundane transidiomatic practice of *saludos*, three scales of transnational family life are constructed and their interconnections mapped. Moreover, my analysis reveals that the hierarchical organization of these familial scales is interactionally contested and contingent upon individuals' differential positions, such as their access to the technology necessary to participate in the transnational scale. Similarly, the spatial and temporal organization of these scales are often in conflict: spatially, the transnational scale is on a higher level, but temporally, it is more momentary and fleeting than either of the co-present scales. This paper therefore argues that, rather than considering the hierarchical organization of scales as given a priori, the emergent and unsettled nature of their stratified structure must be carefully explored in particular contexts of globalized language use.

# States across lexical categories

Linguists and philosophers often mention *states* in characterizing the referential properties of certain lexical items. But different languages use different syntactic categories to encode these meanings, leading to systematic variation in the shape of stative constructions (Francez and Koontz-Garboden, 2011). English exemplifies the three primary strategies for expressing stative meaning attested cross-linguistically: non-dynamic verbs (1), adjectival predicates (2), and certain abstract mass nouns or roots (3) (data from Baker 2003).

- (1) V: Sam **hungers** for pie. (2) A: Sam is **hungry**. (3) N: Sam has **hunger**.

Surprisingly, the semantics literature does not relate the types of stative expressions in (1)-(3) model-theoretically. It is typically assumed that stative verbs denote properties of stative eventualities; that (gradable) adjectives denote (functions from degrees to) properties of individuals; and that abstract mass nouns denote properties of individuals or individual kinds. This heterogeneity in the formal treatment of stative expressions provides the central question of this talk: can stative meanings be captured model-theoretically as a natural class across syntactic categories? The empirical focus of the talk is cross-linguistic variation in the morphosyntax of stative constructions which, I argue, provides important clues to identifying the structures which underlie stative meanings universally. I draw primarily on data from the Senegambian language Wolof, a language which exemplifies two distinct strategies for constructing statives. In addition to class of stative verbs expressing prototypically adjectival concepts (4), Wolof also has a large open class of abstract mass nouns naming human propensities like ‘intelligence’ and ‘strength’. The latter cannot function as predicates on their own, as shown in (5).

- (4) *Awa rafet/njool/bees/baax na-Ø* (5) *\*Awa doole/sago/jom/wërsëk/xel na-Ø*  
Awa pretty/tall/new/good FIN-3SG Awa strength/calm/resolve/luck/wit FIN-3SG  
‘Awa is pretty/tall/new/good.’

Instead, much as we see in English (3), such nouns must first combine with a verb meaning ‘have’ to be predicated of an individual (7), thus resembling with possessed NP constructions (6)

- (6) *Awa am na-Ø ceeb (\*lool)* (7) *Awa am na-Ø xel (lool)* (8) *Awa rafet-na-Ø (lool)*  
Awa **have** FN-3S **rice** (\*very) Awa **have** FN-3S **wit** (very) Awa pretty-FN-3S (very)  
‘Awa has rice.’ ‘Awa is (very) witty.’ ‘Awa is (very) pretty.’

Notice that stative Vs and ‘have’+stative-N compositional predicates are both gradable, and license the same degree modifiers like intensifier *lool* (7)-(8) (as well as special comparative morphology), to the exclusion of possessed NPs like ‘have rice’ (6). This and other data I’ll discuss suggest that compositional ‘have’ + stative-N predicates in Wolof are grammatically equivalent to underived stative Vs.

This grammatical equivalence cannot be captured under existing model-theoretic approaches, which do not provide a basis for relating stative meanings across categories. The conclusion I draw is that statives must share a core property at the level of the semantic ontology. Specifically, I follow the now common (Neo-)Davidsonian hypothesis that the domain of eventualities is sorted algebraically into mass and count, corresponding to states and dynamic events respectively. I propose that what all stative lexemes have in common is reference to mass eventualities (i.e. states), but they differ in semantic type according to syntactic category. This has the positive result of formally capturing the common semantic core behind all stative lexemes, while simultaneously predicting observed morphosyntactic variation. Specifically, I propose that adjectives and stative verbs denote predicates which relate individuals and states to truth values; stative nouns and roots, in contrast, denote simple states or state kinds. This analysis has the positive consequence of explaining why special morphosyntax (often related to possession) is required to make a predicate out of a noun or root naming a simple state (Francez and Koontz-Garboden, 2011): it is because state-referring nouns and roots, unlike stative verbs and adjectives, do not directly select for an individual argument. Thus, my analysis follows much in the spirit of Chierchia (1998): a common ontological domain and set of universal meaning-constructing operations is assumed, and variation simply reflects the different ways of referring to this domain.

Finally, I discuss a proposal to connect gradability to this ontological treatment of states (Tovena, 2001), thus treating gradability not as a characteristic property of adjectives (problematic in light of much cross-linguistic data), but rather of a certain ontological category. I conclude by discussing possible future directions for investigating the relations between gradability, lexical categoryhood, and the semantics of stativity cross-linguistically.

### Vagueness and context-dependence in Luganda temporal remoteness morphemes

In this paper, we point out that past time operators (PTOs) in Luganda, a language that makes three past time remoteness distinctions, are vague and context-dependent, and provide an analysis whereby PTOs contain context-sensitive measure functions akin to gradable adjectives. We call the relevant PTOs RECENT, INTERMEDIATE, and DISTANT ((1-3), respectively).

- |  |   |
|--|---|
| <p>(1) <i>Nzinye</i> (ku matya).<br/>1 SG-dance-REC.PST (LOC morning)<br/>'I danced (this morning).'</p> | <p>(2) <i>Nazinye</i> (jjo).<br/>1 SG-dance-INT.PST (yesterday)<br/>'I danced (yesterday).'</p> |
| <p>(3) <i>Nazina</i> (luli).<br/>1 SG-dance-DIST.PST (another.time)<br/>'I danced (the other day).'</p>  |   |

First, Luganda PTOs give rise to **borderline cases**, where it is difficult to decide whether a past reference time (RT) counts as 'recent', 'intermediate' or 'distant'. Consider (4) as responses to the question "what've you been doing?". In this context, use of the REC PTO is acceptable with *three hours ago*, unacceptable with *five hours ago* and borderline with *four hours ago*. By contrast, the INT PTO is acceptable, while the DIST PTO is infelicitous, for all three cases (omitted for space).

- (4) *Nzinye* saawa {satu/?nnya/#tano} emabega.  
1 SG-dance-REC.PST hour {three/four/five} behind  
'I danced {three/four/five} hours ago.'

Second, what counts as 'recent', 'intermediate' or 'distant' is **context dependent**; e.g., there are contexts where the recent past is acceptable with an RT of a few weeks ago (5), and contexts where the distant past is acceptable for an RT of a few minutes ago (6).

- |  |   |
|--|---|
| <p>(5) a. Context: You plant your crops every year in February. In April I ask what you planted this year. You say you planted maize.<br/>b. <i>Nsimbye</i> kasooli.<br/>1 SG-plant-REC.PST maize<br/>'I planted maize.'</p> | <p>(6) a. Context: We're at a party, and I ask why you aren't dancing to the song that's playing. You say you danced a few songs ago.<br/>b. <i>Nazina</i> luli.<br/>1 SG-dance-DIST.PST another.time<br/>'I danced a while ago (to another song).'</p> |
|--|---|

**Analysis.** We assume that like tenses in English, PTOs in matrix clauses in Luganda restrict the relation between utterance time (UT) and RT (though our proposal can be adapted for recent theories of Bantu PTOs as event time modifiers; Cable 2013). However, while English past tense presupposes that RT precedes UT (e.g. Kratzer, 1998), Luganda PTOs additionally encode as part of their meaning a vague, context-dependent measure function that compares the length of a time interval to a contextual standard. For reasons of space, we illustrate with the recent past morpheme, whose interpretation (7) includes a function **rec**, taking  $t$  (UT in matrix clauses), and returning the earliest time  $t''$  that exceeds a standard of closeness  $s$  to  $t$  (8).

- (7)  $\llbracket \text{REC.PST} \rrbracket^t = \lambda t' : t' \in [\mathbf{rec}(t), t].t'$       (8)  $\mathbf{rec}(t) = \text{earliest}(\lambda t''. \mathbf{close}(t, t'') \succ s)$

On this analysis, Luganda PTOs are modeled like relative adjectives like *tall*, which are also vague and context dependent (Kennedy 2007). Just as the positive standard for *tall* depends on its comparison class, the standards for Luganda PTOs depend on a comparison class of time intervals (growing seasons, song lengths, etc.). This paper therefore highlights and provides an analysis for an aspect of grammaticalized temporal remoteness markers which has not received much attention.

### Split paths in the same domain: The polygrammaticalization of *mi-* in Chini

A striking observation about Chini [afi] (Papua New Guinea) is the prevalence of *mi*, a morpheme with five distinct functions: (1) a distal demonstrative; (2) a pronoun for certain grammatical roles for non-humans; (3) an allative applicative of sorts; (4) a marker of inverse voice; (5) a resultative marker. In this paper, I rely on internal reconstruction and on what is known about plausible grammaticalization pathways cross-linguistically, and focus on the syntactic, semantic, and/or pragmatic forces relevant to each of these last three constructions which caused the pronoun *mi*= to undergo polygrammaticalization along split paths.

A rich area of inquiry in linguistics is the relationship between synchronic polyfunctionality and diachronic processes involving multiple grammaticalization paths. Sometimes, synchronic polyfunctionality is due to the retention of the less-grammaticalized function of a given form alongside its relatively more-grammaticalized function, for instance reflexive markers which become grammaticalized into markers of middle voice (Kemmer 1993;1992). In other cases, polyfunctionality results from multiple paths split off from a common origin (cf. Craig 1991). Split grammaticalization paths have been discussed for languages where multiple paths have occurred in distinct syntactic domains, for instance multiple paths associated with distinct parts of speech (Craig 1991) or in distinct dependent clause types (Givón 1991). Here I show how the polygrammaticalization of *mi* has involved split pathways in the same (i.e., verbal) domain in a way that is dependent on semantic and/or pragmatic factors.

The pathway of the resultative in certain stative clauses and that of the inverse voice marker in certain transitive clauses are (in part) pragmatically parallel. The non-human pronoun *mi*= would be (and synchronically still is) used as a resumptive pronoun in clauses where there is a shifted or contrastive topic. This pragmatic feature can still be seen as a constraint for both constructions, such as this paratactic clause combination with the resultative:

Topic 1		Contrastive topic 2	Resultative-marked verb
<i>Achirki</i>	<i>chi-ni-ndi,</i>	<i>aɲinimki</i>	<b><i>mi-chi.</i></b>
little	EXIST-IRR-cease	much	<b>RES-EXIST</b>

'A little (of the work toward mastering Chini) is completed, (but) much remains.'

In later steps along both pathways, however, the new grammatical function caused the original *non-human* meaning of the resumptive pronoun to be bleached. We can see this in the inverse clause below, where the (left-detached) proximate patient, Airimari, is human:

<i>Airimari</i>	<i>rami</i>	<i>ɲgi=arwayi</i>	<b><i>mi-ay-a.</i></b>
Airimari	pig	3SG.POSS.NREFL=lower.armpit	<b>INV-bite-R</b>

'As for Airimari, the pig had bitten him in his lower armpit.'

A separate development occurred in the pathway resulting in the applicative *mi-*. It functions as an obligatory register of non-human lexical NP arguments with the semantic role of goal:

<i>Wutmi</i>	<i>niɲi</i>	<i>arwã</i>	<b><i>mi-wu-yi.</i></b>
fire	another	jungle	<b>APPL;G-head out-PRF</b>

'Another man (fire-maker) heads out into the jungle.'

The pronoun *mi*= came to be used to mark goal arguments of verb roots whose meaning necessitated a goal. Then, the grammaticalization of two verbal components of certain serial verb constructions into a translocative suffix and a special kind of perfective suffix caused the use of the marker to extend to new verbs, and then eventually to all clauses with an expressed goal.

Taken together, the divergent and at times parallel split paths inherent in the polygrammaticalization of *mi-* add to current knowledge about the historical discourse-based forces that shape and/or constrain the synchronic grammatical behavior of polyfunctional forms.

## The High-on [il] in Seoul Korean: a lexical diffusion or a phonological rule?

This study reports two interesting patterns of one recent sound change in Seoul Korean (SK): the High-on [il] (Jun & Cha 2011). SK is known to show LHLH phrasal tonal patterns in Accentual Phrases (AP), unless an AP starts with an aspirated or tensed consonant (Jun 2000). However, Jun and Cha (2011) report that an AP-initial [il] is sometimes realized with a H tone. Their findings are i) speakers younger than mid 40s are more likely to produce a H tone on [il] and ii) [il] meaning *No. 1* is the most frequently H-toned. However, the present study finds that there are actually two patterns in the realization of the phenomenon. One group shows a tonogenesis, producing [il] *No. 1* with a H tone, but producing [il] *day* and *work* with a L tone (Group 1), whereas the other group treats the phenomenon as a phonological rule, producing all meanings of [il] with a H tone (Group 2).

The present study collected data from 36 SK speakers (16 female and 20 male speakers, age range: 14 - 29). 60 target words were employed; 32 words started with [il], and the other 28 words started with /i/, followed by six other coda consonants or no coda (/i(C)/). Among the 32 [il]-initial words, [il] means *No. 1* in 9 words, *day* in 8 words, and *work* in another 8 words. The other 7 words were not related to *No. 1*, *day*, or *work*. The F0 values were normalized into z-scores.

Mixed effect regression analyses show the interaction between the two groups and the meanings of [il] was significant ( $p < .0001$ ), raising the z-scores of Group 2 by 1.32 (*day*), 1.4 (*work*), and 1.02 (other) but lowering that of [il] *No. 1* of Group 2 by -0.17. Also, the meanings of [il] affected pitch, raising the z-score of [il] *No. 1* by 1.37 higher than those of the other meanings of [il] ( $p < .0001$ ). In addition, a coda /l/ had an effect on pitch, making the z-score of [il] 0.93 higher than those of the other target syllables ( $p < .0001$ ). Lastly, the presence of a preceding partial glottal stop affected pitch, raising the z-score of the target syllables by 0.32 ( $p < .0001$ ).

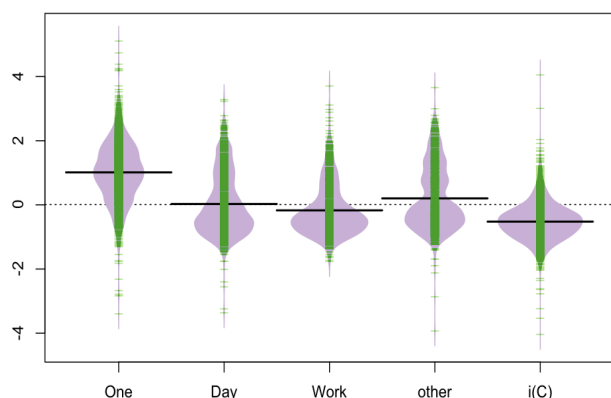


FIGURE 1. Mean values and distribution of z-scores. Bold lines show mean values, and green lines show each observation. Purple batches show the density of z-scores.

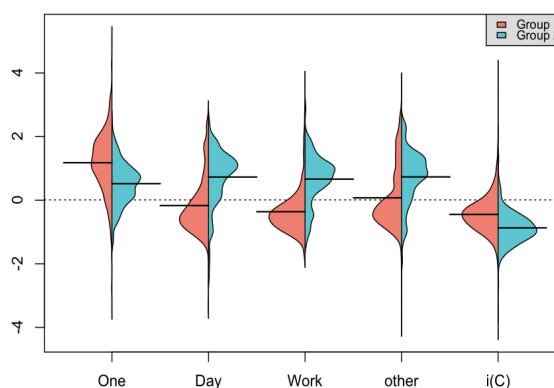


FIGURE 2. Comparison of Group 1 and Group 2. Orange batches show the distributions of z-scores of Group 1, and blue batches show those of Group 2.

Based on the results, I propose that [il] *No. 1* behaves differently from the other meanings of [il] and the phenomenon has started from the meaning *No. 1* (Fig. 1). This proposal is supported by the result that [il] preceded by a partial glottal stop is more likely to be H-toned. Since the vowel length contrast in SK was lost, SK speakers seem to have inserted a glottal stop before [il] to disambiguate the perceptual confusion between [il] '1' and [i:] '2', producing [il] with a tensed voice, but SK listeners have interpreted this redundant phonation cue as a tonal contrast (See Kingston 2011 for discussion about tonogenesis). I propose that this process has resulted in a tonogenesis on the meanings of [il], where [il] *No. 1* is H-toned and [il] *day* and *work* are L-toned (Group 1). However, the speakers of Group 2 have generalized a H tone over all meanings of [il] when they acquired SK. This seems to be because children tend to impose systematicity when there are unpredictable variations (Hudson Kam and Newport 2005).

### Irrealis as verbal non-specificity in Koro (Oceanic)

Reality status is a verbal category that is typically understood as distinguishing between actualized and unactualized or hypothetical states of affairs (Mithun 2001:173). Unactualized contexts include clauses with future temporal reference, negative polarity clauses, and conditionals and counterfactuals. Actualized contexts, in contrast, are positive polarity clauses with past temporal reference. In this paper I present an analysis of the semantics of irrealis morpheme *k-* in Koro, an endangered Oceanic language of Papua New Guinea. I show that although the various uses of this morpheme do not accord with this actualized–unactualized distinction, there is nonetheless a coherent semantics characterizing all of its uses, namely temporal non-specificity.

Bybee (1998) argues that, unlike categories such as perfective and imperfective aspect, reality status is not a cross-linguistically valid category, because so-called realis and irrealis morphemes across languages have widely varying contexts of use, and their range of meanings in the different contexts does not accord with a binary actualized–unactualized semantic feature. But data from Koro and similar languages suggests that, rather than constituting evidence that reality status is not a valid category, the cross-linguistic variation in reality status systems in fact reflects the existence of two separate binary categories: (i) actualization (the canonical reality status system, found for instance in Nanti (Michael in press)); and (ii) verbal (non-)specificity (the category encoded in Koro).

Koro does not have grammaticalized tense; instead it has a system of obligatory reality status and aspect marking. Irrealis marker *k-*, which agrees in number and person with the subject, occurs as expected in future (1), conditional (2), and counterfactual clauses.

- (1) *you k-u piri nambrulu-Ø*  
1SG.SBJ IRR-1SG get:person spouse-1SG.POSS

‘I’m going to take a wife’ (2011-03-07-AH\_AV-03.0092)

- (2) *tehen-e lengin, ra chalau atua kara k-i rombu*  
SIMIL-PROX rain all clothes 1SG.POSS DIST IRR-3SG become.wet

‘If it has rained, all my clothes will be wet’ (Elicitation-2011-03-31-AH\_AV.0004)

It does not, however, occur in negative polarity clauses, as would be expected if its core meaning were ‘unactualized’. Such clauses are instead marked with negative *ta...pwi*.

- (3) *Max ta re-i mweh pwi*  
Max NEG hit-REF.OBJ dog NEG

‘Max did not hit the dog’

Furthermore, irrealis *k-* often occurs in past habitual clauses, which are an actualized context.

- (4) *i k-i la k-i ri pondrawat he rutun le pohaleng*  
3SG IRR-3SG go IRR-3SG stay:IRR play DAT 3PL go beach

‘He would go and play with them on the beach’ (2011-04-23-AA-02.0216-0217)

An almost identical distribution to that of Koro *k-* is reported for the so-called future marker in Mohawk, which Baker and Travis (1997) analyze as a marker of verbal indefiniteness, analogous to markers of nominal indefiniteness. I propose that a similar analysis is apt for Koro *k-*. It marks a predicate as temporally non-specific, indicating that the event is not located specifically in time, because it has yet to occur (future), the reality of its occurrence is unknown (conditionals), or it occurred on multiple occasions, none of which is being referred to directly (habitual). I further argue that the prevalence of similar systems, which are also found, for instance, in numerous other Austronesian languages (Givón 2001:26), the Papuan language Bargam (Hepner 2006), and Tok Pisin (Romaine 1995:412-3), suggests that the category of verbal indefiniteness or non-specificity is widespread. The apparent incongruity of reality status systems cross-linguistically is due to the analytical conflation of two distinct categories — actualization and verbal specificity — each of which, contra Bybee, is an internally coherent and cross-linguistically valid semantic category.

## Subjectification, constructionalization and clitic doubling: A view from Romance

The current work puts forth the argument that the constructionalization (i.e., grammaticalization involving constructions, Noël 2007) of a prominence-enhancing construction shared among some Romance languages progressed diachronically from less to more subjective meanings and functions, following the theory of grammaticalization by Traugott (1982, 1989) and Traugott and Dasher (2002). It strongly suggests the following: information structure constructions whose structural component(s) have deictic or referential functions elsewhere in the language have their genesis in a diachronic process of subjectification. Subjectification is defined as consisting of two trends: (I) meanings based in the external described situation (propositional meanings) shift to meanings reflecting speaker-internal states, and (II) meanings shift from external descriptions and internal evaluative states to metalinguistic situations.

Information structure constructions, such as topicalization and focalization, are inherently about the speaker's relative ordering and relative emphasis of informational elements, and as such, they directly relay some aspect of the speaker's epistemic stance towards the proposition. Thus, their function is to put across speaker-internal states and evaluations. In the current work, data is offered primarily from standard Romanian, as in (1), which will be compared to data from two varieties of Spanish: Rioplatense (Argentinian) Spanish and standard (Castilian) Spanish.

- |     |    |                |  |       |                               |                    |
|-----|----|----------------|--|-------|-------------------------------|--------------------|
| (1) | a. | Preşedintele   | a convocat                             |       | toţi delegaţii.               | (Romanian)         |
|     | b. | Preşedintele   | <b>i<sub>j</sub></b> -a convocat       | *(pe) | toţi delegaţii <sub>j</sub> . |                    |
|     |    |                | CL.PL.MASC                             | DOM   |                               |                    |
|     |    | ‘The president | assembled                              |       | all the delegates.’           |                    |
| (2) | a. | Yo             | tenía guardadas                        |       | las cartas.                   | (both)             |
|     | b. | Yo             | <b>las<sub>j</sub></b> tenía guardadas | *(a)  | las cartas <sub>j</sub> .     | (Rioplátense)      |
|     | c. | Yo             | <b>(*las)</b> tenía guardadas          | *(a)  | las cartas.                   | (Standard Spanish) |
|     |    |                | CL.PL.FEM                              | DOM   |                               |                    |
|     |    | ‘I             | had stored                             |       | the letters.’                 |                    |

The Romanian (1b) and Spanish (2b) clitic doubling construction brings about prominence of the direct object, either information structurally or for discourse and textual effects. This study claims that in both Romanian and Spanish, a standard canonical pronominal reference construction (CP) merged with a differential object marking construction (DOM), marking human direct objects (the markers being *pe* in Romanian and *a* in Spanish). The diachronic mechanisms by which this occurred will be explained using corpus data from historic sources spanning 500 years in both languages. The component constructions CP and DOM, thus, constitute the input to subjectification trend (I). The resulting construction is an information-structure construction, the output of trend (I). Once the construction became entrenched, it took on textual functions, such as discourse topic persistence (Chiriacescu and von Heusinger 2009); this constitutes a progression from trend (I) to trend (II). The textual functions will be illustrating using natural data from Romanian and Spanish, mainly from contemporary news sources.

The grammaticalized construction is independent of the input constructions, but still observes some of the same semantic constraints (such as the animacy constraint) as the input constructions, indicating its relative novelty in the language. Nevertheless, data from Rioplatense Spanish illustrates that in some varieties of Spanish the construction is starting to dissociate itself from the input constraints, for instance, by being able to be used with inanimate direct objects, as in (2b). Thus, we address a long-standing mystery of the optionality of *a* in some varieties of Spanish by placing the loss of *a* in a bigger context of diachronic constructionalization.



## Mechanisms and Chronology of Vowel Harmony Loss in West Rumelian Turkish

Although vowel harmony has been extensively studied within the framework of modern phonological theory, the diachronic trajectory of vowel harmony systems remains much less understood. A particular challenge is posed by accounting for the breakdown of harmony systems; while synchronic motivations for vowel harmony clearly have implications for the development of grammaticalized harmony systems (Harrison et al. 2002), the same point does not necessarily hold true for the erosion of harmony systems. Harrison et al. (2002) develop an agent-based model of vowel harmony that successfully models an S-shaped curve for the emergence of vowel harmony but not for its disappearance. It is clear that language contact is a potential contributing factor to the loss of vowel harmony, but disagreements remain about the specifics of how language contact affects the trajectory of harmony systems; Harrison et al. (2002) suggest that phoneme mergers in a subset of the population may be a driving force, whereas Binnick (1991) argues that vowel harmony loss is best explained through language-internal factors.<sup>1</sup> In this paper, I address this problem through a close analysis of vowel harmony loss in West Rumelian Turkish (WRT), which is a variety of Turkish that is now spoken mostly in Macedonia and Kosovo (but formerly spoken much more broadly in the western Balkans) that has undergone extensive influence from neighboring languages and has lost grammaticalized vowel harmony. The loss of grammaticalized vowel harmony can be manifested either as extreme allomorphy, as in example (1), or as the generalization of invariant morphemes, as in (2), depending on the dialect:

(1) allomorphy: *ben* + *Im* 'my, mine' = *benim*, *benëm*, *benem*, *benuum*, *benəm*, *benom*  
Ohrid Turkish, Kakuk 1972).

(2) invariant morphemes: infinitival marker *-ma*, 1pl optative ending is always *-am*, 3sg conditional suffix *-sa*, affixed comitative postposition *-le*, and the adverbial affix *-ce(s)* / *-çes* (Prizren Turkish, Sureja 1987: 49)

In particular, I argue that language contact – specifically, the imposition of constraints on allomorphy from neighboring contact languages – was a major factor in the breakdown of harmony in WRT.

To make this argument, I draw primarily from descriptions of the modern Turkish dialects of Ohrid (Kakuk 1972), Prizren (Sureja 1987), and Gostivar (Tufan 2007), as well as on a collection of Turkish folk literature from various locations in Macedonia (Hafız 1989). I supplement this with a discussion of the chronology of vowel harmony in WRT that draws on Pulevski (1875), a trilingual text in colloquial Macedonian, Albanian, and Turkish, as well as evidence from Turkish loanwords in Bosnian/Croatian/Serbian and Albanian (Škaljić 1966, Dizdari 2005).

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1 However, it is worth noting that within the Turkic family, which is characterized by pervasive grammaticalized harmony, three languages have lost vowel harmony: Uzbek, Karaim, and West Rumelian Turkish. All three of these languages have undergone extensive language contact with non-harmonizing Indo-European languages.

## Network effects on phonological variation in a Mesoamerican language

The extent to which sociolinguistic variation has been studied outside of urban, Western contexts is limited. There are studies that address this gap (c.f. Stanford and Preston 2009), but they make up a small proportion of the body of literature related to language variation. Studying linguistic variables in a wider range of societal contexts is important to better understanding the various ways in which change is propagated; previous studies on non-Western minority languages have shown that the social variables best known to correlate to conservative or progressive speech in commonly-studied languages do not pattern in the same ways in all cultural contexts (Romero 2009; Léo Léonard and Tuyuc Sucuc 2009). The current study contributes to knowledge about sociolinguistic variation by exploring the effect of social networks on phonological change in a small, closed, indigenous community.

The language in question is Nigromante Zapotec (NMZ), which is an Oto-Manguean language spoken in the foothills of the Sierra Norte of southern Mexico. One way in which NMZ is especially interesting is that it blends features of various Zapotec towns of the Sierra Norte, as a result of historical migration from these towns. Partly as a result of this historical dialect mixing, there is a notable level of variation between NMZ speakers native to the town. This study examines two sound changes in progress in NMZ, and uses a social network analysis to interpret the ways in which these sound changes are being propagated through the community.

Both sound changes affect sonorants: there is a shift from a post-alveolar nasal tap / $\tilde{r}$ / to / $n$ /. These two phonemes were historically contrastive in the language, so this shift is eliminating a phonological contrast. The other sound change maintains a contrast between post-alveolar lateral tap / $l$ / and / $l$ /, but / $l$ / is shifting to / $r$ /, a phoneme formerly not present in NMZ. (author's field notes)

Using wordlist and free speech data collected from 24 speakers representing 12 households, I correlate sociolinguistic data provided by speakers to the levels of recently introduced phonemes / $r$ / and / $n$ /, versus / $l$ / and / $\tilde{r}$ /, respectively. Speakers were selected on the basis of several parameters: households with at least two generations of speakers were used to get apparent-time data, and households with varying levels of community integration were selected for use in network analysis effects. Both males and females of varying ages were interviewed, and households that were located varying distances from the town center were used to complement social integration data (which can be subjective) with quantifiable geographic data.

Analyses of NMZ wordlist data suggest that the spread of new phonological variables in NMZ correlates most closely with social networks: the more integrated an individual, the more likely he or she is to display novel phonemes / $r$ / and / $n$ / in his or her speech. Social networks have been used to study variation in much larger populations (Lippi-Green 1989; Milroy and Milroy 1993; Milroy 2002), so the use of this analytical framework for NMZ can highlight the ways in which social networks in small, closed communities differ from and are similar to networks in urban contexts. In turn, this study contributes to current knowledge about how variation is propagated in different ways and correlated with different variables in a variety of socio-cultural environments.

### When phonology undergenerates: Evidence from Asturian enclitic structures

Enclisis/proclisis alternations have been traditionally analyzed in Romance languages as resulting from the interaction between syntax and phonology, whereby a phonological filter of sorts prevents clitics from appearing in first position (cf. Rivero 1986 for Old Spanish; Campos 1989 for Galician; Barbosa 1995, 2000 for European Portuguese, *a.o.*). Asturian, a Western Iberian Romance language which has not received much attention in linguistic studies both traditional and current, exhibits similar clitic placement alternations as those found in Galician and European Portuguese. A verb-initial context as that in (1) triggers exclusively enclisis, whereas only proclisis is grammatical under the presence of the negative marker, as in (2).

- (1) Ficiéron**lo** bien [ \***Lo** ficiéron bien]  
 did<sub>3PL</sub>-it<sub>CLITIC</sub> well  
*“They did it well”*
- (2) Nun **lo** ficiéron bien [ \*Nun ficiéron**lo** bien]  
 not it<sub>CLITIC</sub> did<sub>3PL</sub> well  
*“They didn’t do it well”*

Traditional analyses claim that since the phonological filters require the clitic to have a “phonological host” to its left for the derivation to converge, enclisis in (1) and proclisis in (2) follow. However, this analysis fails to account for the enclisis we find in subordinate contexts in Asturian as those in (3). In short, if the presence of the complementizer in (3a) bars the clitic from appearing in first position, the enclisis would be expected to be ruled out, contrary to fact. Further, consecutive structures as those in (3b) show that only enclisis is grammatical. If the complementizer serves as a possible phonological host for the clitics in (3a), why it fails to do so in (3b) remains unexplained.

- (3) a. Digo [qu’ayúdame] [que **me** ayuda]  
 say<sub>1SG</sub> that-help<sub>3SG-IND</sub>-me<sub>CLITIC</sub>  
*“I say that s/he helps me out”*
- b. Yera tan pija [que llamáben**la** Bambi] [ \*que **la** llamaben]  
 was<sub>3SG</sub> so preppy that called<sub>3PL-IND</sub> -her<sub>CLITIC</sub> Bambi  
*“She was so preppy that they used to call her Bambi”*

Assuming, in line with Rizzi (1997) and subsequent work, a left-periphery structure as that in (4), I will argue that enclisis/proclisis alternations as those in (1)-(3) arise as a result of Fin° being a phase-head (cf. Chomsky 2008) with an edge-condition.

- (4) [<sub>ForceP</sub> Force° [<sub>TopicP</sub> Topic° [<sub>FocusP</sub> Foc° [<sub>FinitenessP</sub> Fin° [<sub>CliticP</sub> Clitic° [<sub>TP</sub> T° ...]]]]]]]

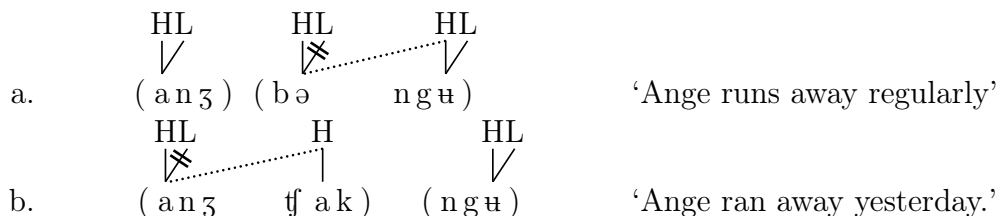
I contend that the proposed edge-condition of Finiteness° can be satisfied either by A'-movement or by the closest available head, satisfied by verb movement and triggering enclisis in (1), and by the negative marker and triggering proclisis in (2). Enclisis in subordinate environments as those in (3) will be claimed to follow from the position of the complementizer. Following Demonte and Fernández-Soriano (2009), I will argue that *que* “that” in subordinate contexts as that in (3a) may be licensed in either Force° or Finiteness°, giving rise to enclisis and proclisis respectively. For consecutive structures as that in (3b), I will contend that the *que* “that” complementizer manifests exclusively Force°, and that the edge-condition of Fin° triggers verb-movement and consequently, enclisis, akin to the structure in (1). Further evidence for my analysis comes from the interpretation of the sentences in (3). Enclisis gives rise to an interpretation that marks the content of the embedded clause as part of the belief state of the matrix predicate’s subject or the speaker, what I call a [+conviction] interpretation. I will argue that the presence of Force° correlates with a [+conviction] pragmatic interpretation, which accounts naturally for the interpretation of enclisis in subordinate environments as those in (3).

## Contour Tones and Prosodic Structure in Medumba

The present study investigates the behavior of contoured syllables in Medumba, a Grassfields Bantu language, illustrating how durational properties of contour tones serve as the basis of a weight distinction between syllables bearing contoured (long) vowels, and all other syllables. Medumba has no contrastive vowel length; however, we provide phonetic data showing contoured syllables are produced with significantly longer duration than level syllables. Interestingly, contoured syllables also behave uniquely both in terms of their prosodic organization and their ability to trigger phonological processes such as downdrift.

**Contour Tones are Preferred Foot Heads** Medumba has binary feet built from right to left, as evidenced by a process of High Tone Anticipation (Franich, 2013). In a sequence of three syllables, we find HTA occurring between the second and third syllables (1a). However, in a mix of level and contoured syllables, default footing direction is altered to ensure contoured syllables are always in head position (leftmost) in a foot (1b).

(1) Contour Tones are Preferred Foot Heads



**Contour Tones Trigger Sentence-Initial Downdrift** Downdrift and downstep are common processes in Medumba which result when two H tones are separated by a L tone, which may be phonetically realized (downdrift) or floating (downstep). In sentence-initial position, nouns which are underlyingly H with a floating L suffix are unable to trigger downstep on a following H word. Disyllabic H.L words also cannot trigger downdrift in initial position on a following H word. However, a subject bearing a HL contour can trigger downdrift on a following H syllable. We provide evidence that the domain for downstep and downdrift is the Intonational Phrase (ι-phrase). We furthermore argue that durational properties of contour tones do reflect a phonological weight distinction between contoured and level toned syllables, and attribute apparent asymmetries in downstep/downdrift behavior between contoured and level tones to a need on the part of the language to align the left edge of a ι-phrase with a heavy (contoured) syllable.

This work makes three substantial contributions. First, our findings contribute to a growing body of literature on contour tone languages suggesting that, in languages which have them, contour tones are associated with prominent positions, while level tones are generally associated with non-prominent positions (see Qu & Goad (In progress) for similar claims based on data from Mandarin). Second, our results highlight some ways in which prosodic structure can interact with lexical tone, compelling us to consider an additional layer of complexity in an already very complex system of lexical tone. Third, our work contributes to the small but growing body of phonetic research on African languages. By providing phonetic measurement to substantiate our claims about phonological structure, we are able to characterize a weight distinction which might otherwise be difficult to identify.

## Asymmetric correlations between English verb transitivity and stress

**Introduction.** It is well-known that lexical categories affect phonological behavior (Smith 2011). Perhaps the best-known example is that English disyllabic nouns are likely to be trochaic (94%), while disyllabic verbs are likely to be iambic (69%) (Chomsky & Halle 1968, Kelly & Bock 1988). In this paper, I show that the asymmetry goes further: English disyllabic intransitive verbs are more likely to be trochaic than transitive verbs, even after controlling for morphological category and syllabic profile. I then demonstrate that the likelihood of a verb to be trochaic significantly correlates with its likelihood to be phrase-final, suggesting that Gordon (2000)’s conjecture that the source of stress retraction from final syllables in certain words is due to avoidance of clash with phrase-final boundary tones is a possible explanation for these asymmetric stress correlations.

**Statistical confirmation of the asymmetry.** I extracted the disyllabic verbs from the CELEX English database (Baayen et al 1995). Counting the various basic verb types yields the distribution:

All verbs	Trochaic	Iambic
Obligatorily transitive	506 (39%)	804 (61%)
Ambitransitive	357 (55%)	293 (45%)
Obligatorily intransitive	227 (64%)	130 (36%)

Fisher’s exact tests show that the percentage of verbs that are trochaic or iambic significantly differs by transitivity:  $p = 8.686e^{-12} \ll 0.01$  between obligatorily transitive and ambitransitive verbs;  $p = 0.009 < 0.01$  between ambitransitive and obligatorily intransitive verbs.

A logistic regression verified that this asymmetry is not due to independent factors such as morphological category and syllabic shape of the word. While some morphological categories and syllable 1 shapes have significant correlations with stress pattern, the effect of transitivity remained significant, as confirmed by a nested model comparison via ANOVA ( $p = 5.33e^{-14} < 0.01$ ). English thus exhibits a gradient pattern of stress retraction from the final syllable in intransitive verbs.

**Sources of the asymmetry.** In the case of the noun/verb stress asymmetry, it has been suggested that different parts of speech can simply possess different phonological grammars (Smith 2011). The result above suggests that if this were the case, then phonological grammars would need to be more finely subdivided based on factors such as transitivity.

An alternative explanation by Kelly (1988) and Kelly & Bock (1988) is that nouns tend to occur in trochaic environments (e.g. following unstressed determiners) while verbs tend to occur in iambic environments (e.g. followed by unstressed suffixes). The fact that intransitive verbs are not followed by unstressed determiners of direct objects may reduce the pressure towards iambicity.

A third explanation that unifies both the noun/verb and transitive/intransitive asymmetries comes from Gordon (2000)’s account of NONFINALITY, from which it follows that words more likely to be phrase-final are more likely to be trochaic. The correlation is confirmed by a survey of the Penn Treebank (Marcus et al. 1993) shows that 28.9% noun stems are phrase-final, compared with 7.8% of verb stems. Obligatorily transitive verbs occur phrase-finally 6.3%, ambitransitive verbs 8.4% and obligatorily intransitive verbs 14.2% of the time. Logistic regressions showed that likelihood of a word to be phrase-final was highly predictive of trochaicity (noun/verb:  $p < 2e^{-16}$ , trans/intrans:  $p = 0.01 < 0.05$ ).

## MIRATIVE MEANINGS AND THEIR GRAMMATICALIZATION SOURCES

Mirativity, a widespread phenomenon in the world languages, was first proposed in DeLancey (1997) as the grammatical marking of unexpected information. However, a comprehensive typological description of mirative constructions using a large sample of languages has not been attempted yet, nor grammaticalization sources of miratives have been fully explored. Thus, the present investigation describes miratives from a typological perspective by focusing on two controversial theoretical aspects: the classification of mirative meanings and their sources of grammaticalization.

Regarding mirative meanings, Aikhenvald (2012) proposes the following classification: sudden discovery, surprise, unprepared mind, counterexpectation and new information. Nevertheless, this taxonomy does not follow an operational criteria and does not explain how these meanings differ from each other. On the other hand, the grammaticalization of other functions into miratives has only been related to inferential evidentiality (DeLancey 2001). However, recently, Hill (2012) has challenged this conception by arguing that miratives can be reduced to eyewitness marking.

The present investigation aims to describe the different mirative meanings, as well as the relationship of miratives to evidentiality and other grammaticalization sources. For this purpose, I examined the descriptions of a total of 57 mirative constructions in a sample of 80 languages –from which 48 use mirative constructions. The sample follows the diversity criteria described in Dahl (2008). A careful examination of the data shows that mirative meanings can be divided into two basic types: either the mirative specifies the speaker's specific expectations about the event or merely states that the event is unusual and thus surprising in itself. In cognitive linguistics terms, miratives of the former type include in their conceptual base the speaker's previous expectations concerning the state of affairs (Langacker 2007), whereas miratives referring to surprising events merely state that the event is unusual respect to a general background, which can be the speech situation.

In addition to evidential constructions, truth-focus and presentational constructions also function as sources of grammaticalization of miratives. All these sources of grammaticalization follow paths of subjectification (Traugott 1989) that leads to mirativity. It is also argued that miratives using eyewitness evidentials are more related to presentational constructions, whereas miratives using inferential and other similar markers are more related to the inclusion of the speaker's previous expectations in the conceptual base. The first pattern undoubtedly has caused Hill's misleading conception of mirativity as a mere eyewitness marking. Finally, it is worth noticing that the mirative distinction between unusual and unexpected events agrees with findings of cognitive sciences concerning how the mind processes surprising events (Reisenzein et al. 2012).

### Micro-variation within Bizkaiera Basque: Evidence from RCs

Two micro-dialects within Bizkaiera Basque are identified: A PP Headed RC under a matrix ergative or absolutive Case (1) is grammatical in micro-dialect A and ungrammatical in micro-dialect B.

- (1)  $[[e_i \text{ Etorri nintzen}] \text{ mutilekaz}_i] \text{ etxie erosi dabie.}$   
 $\emptyset$ .SOC come aux.A1s-C boy.D.**pl**.SOC house.D buy aux.A3sE**3pl**  
 ‘The boys that I came with bought the house’

De Rijk (1962), Oyharçabal (1988) and Artiagoitia (1992) assume the Head External Analysis for Basque Relative Clauses. I prove that these two micro-dialects follow the Head raising analysis to build RCs ([DP [CP DP<sub>i</sub> [C’ [TP ...t<sub>i</sub> ...]]]D]). Evidence for this comes from idioms and scope interaction. First, an idiomatic interpretation arises only via a local relationship between the verb and the object. Given that (2b), out of (2a), retains the idiomatic interpretation, we can conclude that there is a local relation between the RC-verb and the Head, thus there is raising of the Head to its surface position. Second, in scope interactions, the universal quantifier *bakoitz* ‘each’ always has a distributive interpretation, and as such, it must get scope over a variable (Ettxebarria 2012). The grammaticality, and therefore, the distributive interpretation of (3) indicate that the variable left by the Head occupied a position c-commanded by *bakoitz* (i.e., internal to the RC), thus the Head originated within the RC.

- (2) a.  $\text{Geur [piper ein] dozu eskolara.}$   
 today pepper.ABS do aux.3s3s school.ELAT  
 ‘Today you cut school’ (Lit: ‘Today you did pepper to school’)  
 b.  $[[\text{Eskolara [ei ein] dozun}] \text{ piperraki}] \text{ ez dotsu notarako konteko}$   
 school.ELAT  $\emptyset$ .ABS do aux.3s2s-C pepper.D.ERG no aux.3s3s2s grade.BEN count  
 ‘The fact that you have cut school will not count for your grade’
- (3)  $[\text{Mediku bakoitzak ei trate dauzen}] \text{ hiru pazientiek] etorri ziren.}$   
 doctor each.ERG  $\emptyset$ .ABS treat aux.A3sE3pl-C three patient.D.pl.ABS come aux.A3pl  
 ‘The three patients that each doctor treated came over’

The variation between the two micro-dialects is due to the different status of their P. In micro-dialect A, the P has a matrix that includes unvalued D and  $\phi$ -features, while in micro-dialect B the P only has an unvalued D feature. Assuming that a Probe is able to target and Agree with the valued u-features that the P obtained by Agreeing with its DP complement (Řezáč 2008), in micro-dialect A, the external D copies the Case and  $\phi$ -features values of the internal P allowing it to value the  $\phi$ -features of the Probe T/ $\nu$ . In micro-dialect B, however, the external D copies just the Case value of the internal P since the Goal has a Case value but lacks  $\phi$ -features, and therefore, the external D cannot value the  $\phi$ -features of the Probe T/ $\nu$ . This difference status of P can also be observed in a long distance extraction: the intermediate  $\nu$  is able to get its unvalued  $\phi$ -features valued Agreeing with the extracted PP in micro-dialect A (4a) while not in micro-dialect B (4b). In (4a), the intermediate auxiliary verb *dauz* (absolutive third person plural) shows agreement with the Head *mutilekaz* ‘with the boys’ (third person plural), whereas in (4b) the intermediate auxiliary verb *dau* (absolutive third person singular) does not.

- (4) a.  $e_i \text{ etorri nintzela Nereak esan dauzen mutilekaz}_i \text{ etxie erosi dabie.}$   
 $\emptyset$ .SOC come aux.A1s-C Nerea.ERG say aux.A**3pl**E3s-C boy.D.**pl**.SOC house.D buy aux.A3sE**3pl**  
 ‘The boys Nerea said that I came with bought the house’
- b.  $e_i \text{ etorri nintzela esan dauen mutilekaz}_i \text{ jolastu deu Nereak.}$   
 $\emptyset$ .SOC come aux.A1s-C say aux.A**3s**E3s-C boy.D.**pl**.SOC play aux.E3sA3s Nerea.ERG  
 ‘Nerea played with the boys that she said that I came with’

### Intervention and clause type sensitivity in Basque

This paper proposes a solution to a longstanding problem concerning clause-type effects on word order in Basque. The analysis lends support to recent approaches to some clause-type sensitive phenomena as intervention effects (Haegeman, 2010a,b, 2011).

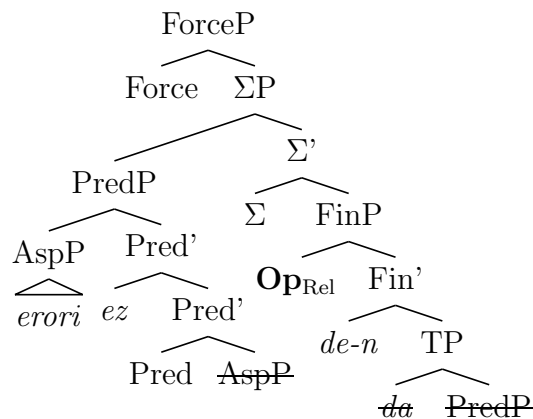
In Basque, the order of the tense-bearing auxiliary and extended verbal shell is sensitive to polarity (Ortiz de Urbina, 1989; Laka, 1990; Uribe-Etxebarria, 1994): in root contexts, affirmative clauses are ordered VP-Aux, while negative main clauses are ordered Neg-Aux-VP, as in (1). Less well described in the literature is the fact that this word order alternation is sensitive to clause type. (See Ortiz de Urbina (1992); Artiagoitia (2003); Etxepare (2003) for brief discussion). For embedded declaratives with the complementizer *-(e)la*, the word order is uniformly Neg-Aux-V, as in root contexts ((2a)). For embedded interrogatives, factives, relatives and temporal adverbials, which take the complementizer *-(e)n*, V-Neg-Aux is obligatory or optional (depending on clause type and dialect), as in the relative clause example in (1). All affirmative embeddings are ordered V-Aux as in root clauses.

- |   |  |
|---|--|
| <p>(1) a. Anek Jon ikus-i du.<br/>               Ane Jon see-PERF AUX<br/>               ‘Ane has seen Jon.’</p> <p>b. Anek ez du Jon ikus-i.<br/>               Ane NEG AUX Jon see-PERF<br/>               ‘Ane hasn’t seen Jon.’</p> | <p>(2) a. Uste dut ez de-<b>la</b> eror-i.<br/>               think AUX NEG AUX-<b>comp</b> fallen<br/>               ‘I think (it) hasn’t fallen.’</p> <p>b. Error-i ez de-<b>n</b> etxea<br/>               fall-PERF NEG AUX-<b>comp</b> house<br/>               ‘The house that hasn’t fallen.’</p> |
|---|--|

What the clause types that allow/require V-Neg-Aux orders share is an operator—relative, factive, interrogative, or temporal—in the left periphery. We propose that V-Neg-Aux orders reflect the interaction of these operators with negation. Specifically, we propose that *ez* is a negative adverbial merged TP-internally. In root and *-(e)la* clauses like (1b), it moves to a left-peripheral  $\Sigma$  phrase Laka (1990); affirmative orders like (1a) are derived from raising a TP-internal PredP to this same position. Support for such predicate fronting comes from TP ellipsis sentences, as in (3). Here, the auxiliary in the second sentence is left unpronounced, plausibly as a banal case of TP ellipsis Laka (1990). On approaches that take the affirmative order to reflect a right-headed T, additional bespoke operations are required.

- (3) Jon-ek kafea erosi du, eta Ane-k [ΣP [PredP liburu-a leitu] Σ [TP ~~du~~].  
 Jon-ERG coffee bought has and Ane-ERG book-the read  
 ‘Jon bought a book and Ane read a journal.’

We propose that V-Neg-Aux, which only (4) occurs in the presence of an operator, reflects a smuggling repair (Collins, 2005a,b), whereby PredP raises with *ez* inside, past the operator in FinP, as in (4). The fact that the main verb and dependents appear to the left of *ez* reflects *roll up*-raising of the complement of Pred to an outer specifier. In those *-(e)n* clauses where the alternative Neg-Aux-V occurs, the operators are optionally (re-)merged higher in ForceP, where they do not intervene between  $\Sigma$  and *ez*.





### Staying in shape in Norway

In recent generative literature, cross-linguistic variation in passive symmetry—the (non-)availability of theme passivisation out of double object constructions (DOCs)—has typically been explained in terms of locality (Anagnostopoulou, 2003; McGinnis, 1998; Ura, 1996). According to this model, in languages without theme passivisation, theme-raising to T is blocked by the intervening goal. Languages *with* theme passivisation differ minimally in the availability of short theme movement to an outer spec of the same projection hosting the goal, enabling the theme to subsequently raise to T without crossing the goal, as in (1).

(1) [<sub>TP</sub> theme T... [<sub>XP</sub> ~~theme~~ goal X... [<sub>YP</sub> Y ~~theme~~]]] (Theme passives-locality approach)

In support of this approach, Anagnostopoulou (2003) notes a cross-linguistic correlation within Mainland Scandinavian between the availability of theme-goal orders in object shift (OS) and theme-goal orders in passive contexts, as in (2) and (3) respectively from Norwegian. In Norwegian/Swedish which allow theme-passives, *some* speakers accept theme-goal orders in OS. In Danish, theme-goal orders are disallowed in both contexts. Anagnostopoulou takes this correlation as evidence that short theme movement feeds theme passivisation.

- |  |   |   |
|--|---|---|
| (2) <b>Passive</b>   | (3) <b>Active OS</b>  | (4) <b>Active non-OS</b>  |
| a. Per ble gitt bok-en.<br>Per was given book-the<br>'Per was given book-the.' | a. Jeg ga ham den ikke.<br>I gave him it not<br>'I didn't give him it.' | a. Jeg har ikke gitt ham den.<br>I have not given him it<br>'I haven't given him it.' |
| b. Bok-en ble gitt Per.  | b. %Jeg ga den ham ikke.  | b. %Jeg har ikke gitt den ham.  |

Anagnostopoulou's approach makes a strong prediction about cross-speaker variation: speakers should accept (2b) iff they accept (3b). We test this with an acceptability judgment experiment with 505 native speakers of Norwegian. The experiment crossed object order (*theme-goal/goal-theme*) with context ((2)-(4)). Subjects judged four lexicalisations of these six conditions via a web-based application. Results revealed no correlation in acceptability of theme-goal orders between the passive and either of the two active conditions. However, acceptability of theme-goal orders in active OS and non-OS conditions *did* correlate ( $r=.57$ ,  $p<.00001$ ). Assuming a structure for DOCs with the goal merged above the theme, these results suggest that theme movement above the goal in active non-OS contexts, feeds theme-goal orders in OS, i.e. speakers accept the latter iff they accept the former. Importantly, theme-goal orders in active and OS contexts appear *not* to feed theme-goal orders in passives.

We propose that these facts are best expressed not in terms of locality but in terms of shape conservation, i.e. derivational constraints on linearization of syntactic objects, following Fox and Pesetsky's 2005 (FP) cyclic linearization proposal (see also Anagnostopoulou, 2005). FP propose that precedence relations among syntactic objects are established phase-by-phase, and extra-phasal movement cannot permute the linear order of two syntactic objects, since this would entail conflicting ordering relations. We propose that theme-goal orders in active contexts reflect optional movement of the theme to an outer spec of Appl, as in (5). We further assume that, in active but not passive contexts, little-*v* is a phase head (Chomsky, 2000), and that transitive-*v* therefore freezes the order of arguments in its c-command domain. Theme-passivisation is not fed by this short theme movement but rather reflects variation in whether the "extra" probe in applicative structures is located on Appl or a linker head above ApplP, where it probes the goal. In passives, where *v* is not a probe, the T will probe and attract the theme across the (previously probed) goal, as in (6).

(5) [<sub>TP</sub> T [<sub>vP</sub> v [<sub>ApplP</sub> theme goal Appl [<sub>VP</sub> V ~~theme~~]]]]

(6) [<sub>TP</sub> theme T [<sub>vP</sub> v-passive [<sub>LkP</sub> Lk [<sub>ApplP</sub> goal Appl [<sub>VP</sub> V ~~theme~~]]]]

## Scandinavian Object Shift: The interface between syntax, phonology and information structure

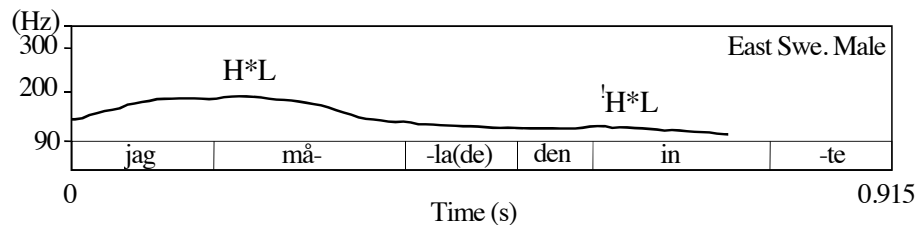
I propose a new model that accounts for the interaction between the grammatical components, on the basis of experimental and statistical data on Scandinavian Object Shift (OS, referring to weak pronoun shift only).

The particular property of OS is that pronominal shift is dependent on verb movement (*Holmberg's Generalization*, Holmberg 1986). Specifically, in simple tense forms, in which the main verb moves to the second position, the object pronoun can move too (1a). When the main verb does not move, e.g. in complex tense forms in which a (past participle) main verb does not move due to the presence of the auxiliary verb, the object pronoun cannot move either (1b). No movement phenomenon other than OS in which movement of a sentential element is dependent on that of another sentential element has been found. Due to this property, OS has long been one of the most controversial issues in generative syntax (e.g. Chomsky 2001).

- (1) a. Jag målade <<sup>OK</sup>den> inte [<sub>VP</sub> målade <<sup>OK</sup>den>]. 'I didn't paint it.' [Swe.]  
 b. Jag har <\*den> inte [<sub>VP</sub> målat <<sup>OK</sup>den>]. 'I haven't painted it.'

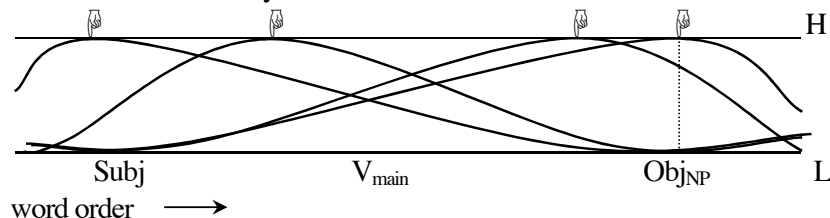
With experimental and statistical data collected from the Scandinavian varieties investigated, I show that downstep (cf. Gussenhoven 2004) occurs in the OS construction. On the basis of Bruce (1977), it is predicted for, e.g. East Swedish, that the focal H(igh) contour that expresses the focus of a sentence should occur after the main verb in the OS construction of simple tense forms; the pitch peak should occur on the next accentable syllable, i.e. on the first syllable *in-* of the negation *inte*. However, in the typical case, the pitch does not rise on the negation, as illustrated in (2): the F0 on the negation is always lower than the F0 on the main verb.

- (2) Simple tense forms (=1a):



I propose a new system that accounts for the facts on OS as well as the interaction between the grammatical components in general. The basic idea is that in theorizing the interaction between syntax, phonology and information structure, only the loci of the sentence focus and the highest pitch peak need to be taken into account, since the locus of the highest pitch peak always indicates that the sentence focus is also there (or quite near it). See (3). The syntactic word order, here SVO, goes on from the left to the right. The focal point of a sentence is indicated by the focal pointer *fp*, '👉', which is the indicator of the change in the information flow of a sentence. In transitive constructions, the focus is carried by a (full NP) object (*Obj<sub>NP</sub>* below) in the unmarked case. The *fp* and the pitch peak occur on it. It is cross-linguistically predicted that the farther, e.g. to the left, the focal point moves from an unmarked position, the more an unmarked intonation pattern is likely to change, and the more an unmarked syntactic word order is likely to be affected, which is confirmed in various languages.

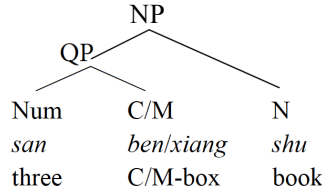
- (3) The interaction between syntax, intonation and information structure



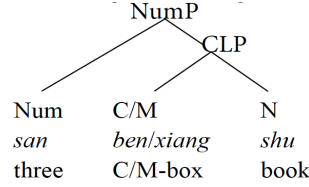
### The Unit Phrase in Mandarin

Since Cheng and Sybesma (1999), the headedness of measure words and the semantic distinction between classifiers and massifiers have received great attention. Various structures have been proposed to account for Chinese noun phrases with classifier/massifier: a unified left-branching structure (Huang 1982, Tang 1990, and Hsieh 2008, as in (1)), a unified right-branching structure (Tang 1990, Cheng and Sybesma 1999, Borer 2005, among others, as in (2)), and a non-unified account (Zhang 2011, i.e., (3a) and (3b)).

(1) Left-branching Structure



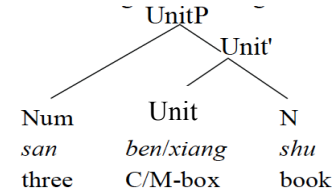
(2) Right-branching Structure



(3) Non-unified Account

- a. Structure (1) for massifier  
b. Structure (2) for classifier

(4) The Proposed Structure: Unit Phrase



**[The Proposal]** In this paper, I show that taking a joint approach of phonology and syntax provides us new data to examine the internal structure of Chinese nominals. Following Cheng and Sybesma (1999),

I argue that measure words (both classifier and massifier) syntactically function as the head of Unit Phrase (hence UnitP), a distinct projection dominating NP, and that the occurrence of Unit head changes the semantic core of the whole nominal expression. Nonetheless, unlike previous proposals, I argue that numerals should be analyzed as the specifier of UnitP, rather than a distinct projection dominating UnitP. It is shown in (4) above.

**[Argument 1]** The proposed structure (4) receives its initial support from the fact that modifiers of UnitP have scope over the whole nominal. Examples in (5) show that the modifiers of Unit and those of N are semantically contradictory, but the expressions are grammatical, and the NP is interpreted under the scope of UnitP.

- (5) a. [<sub>UnitP</sub> **tebie** **dade** san ke [<sub>NP</sub> **xiao** fanqie]]  
unusually big three Unit small tomato 'three unusually-big-sized small tomatoes'  
b. [<sub>UnitP</sub> **hen** **houde** san pian [<sub>NP</sub> **bo** shaubing]]  
very thick three Unit thin bread 'three very thick pieces of thin bread'

**[Argument 2]** The proposal (4) is also supported by the fact that numeral phrases are parasitic on Unit within a nominal expression. Examples in (6) show that a numeral cannot surface alone within a nominal, but its occurrence relies on the Unit head, even when the numeral is a complex phrase, as exemplified in (7).

- (6) a. \*Wo mai-le **san** shu. b. Wo mai-le **san** ben shu.  
I buy-PERF three book I buy-PERF three Unit book  
'I bought three books.' 'I bought three books.'  
(7) Wo mai-le **chaoguo** **sanshi** \*(ben) shu.  
I buy-PERF more.than thirty Unit book 'I bought more than 30 books.'

**[Argument 3]** The prosodic interaction further supports the proposed structure (4). In Mandarin, the third tone [214] undergoes tone sandhi and becomes the second tone [35] when the syllable carrying the third tone is followed by another third tone syllable (e.g., (8a)). Although in the phonology literature (Dunmu 2005 and the references therein), there is no consensus on what constitute the obligatorily sandhi domain, interestingly, if we pay closer attention to the syntactic structure of the data, we find where the third tone sandhi rule optionally applies is between a head and its complement, but that the third tone sandhi rule always has to apply between the specifier/modifier and its head (e.g., (8b) adjective-N, (8c) intensifier-adverb, (8d) AdvP-V).

- (8) Mandarin Third tone sandhi: a. [<sub>N</sub> **lao.shu**] b. [<sub>NP</sub> **hao jiu**] c. [<sub>AdvP</sub> **hen hao**] d. [<sub>VP</sub> [<sub>AdvP</sub> **hen hao**] **yang**]  
'mouse' good wine very good very good raise  
Underlying tone: 214.214 214 214 214 214 214  
Surface tone: 35.214 35 214 35 214 35 35 35

Based on this observation, example (9) shows that the third tone sandhi rule has to apply between the numeral phrase and the Unit ((9a) vs. (9b)), although it can optionally apply between the Unit and the noun ((9b)-(9c)).

- (9) **wu.bai** **dang** **yingpian** 'five hundred films'  
five.hundre Unit film  
Underlying tone: 214.214 214 214.51  
a. \*Surface tone: [<sub>UnitP</sub> 35.214 [<sub>Unit'</sub> 35 [<sub>NP</sub> 214.51 ]]  
b. Surface tone: [<sub>UnitP</sub> 35.35 [<sub>Unit'</sub> 35 [<sub>NP</sub> 214.51 ]]] → specifier-head between numeral and Unit  
c. Surface tone: [<sub>UnitP</sub> 35.35 [<sub>Unit'</sub> 214 [<sub>NP</sub> 214.51 ]]] → head-complement between Unit and NP

I argue that the current proposal explains the same range of data as other proposals do, and it directly accounts for facts such as nominal-internal ellipses and the coordination phenomena through a unified account.

### On the category of interlocutor expectation in Kurtöp

Kurtöp, an endangered Tibeto-Burman language of Bhutan, has been described to have a rich evidential system encoding source of knowledge alongside other related categories, such as mirativity and egophoricity (e.g. Hyslop 2011). The categories of evidentiality and mirativity, have been established and debated in the literature for several years, if not decades (e.g. Aikhenvald 2004, DeLancey 1997). However, Kurtöp also encodes a category which has not yet been described in the literature, that of speaker expectation of interlocutor knowledge. The aim of this talk is to illustrate this category in Kurtöp and raise the question of the cross-linguistic relevance of this category.

In perfective aspect Kurtöp makes a five-way contrast between various evidential and evidential-like categories. The primary contrast between two of these forms, *-shang* and *-pala*, is one of speaker expectation of interlocutor knowledge. The form *-shang* is used when the speaker does not expect the hearer to have the knowledge, for example if the speaker is self-reporting or when a doctor is speaking to a patient. The form *-pala*, on the other hand, is used when the speaker expects someone else to share the knowledge, for example when reporting about third person or revisiting a first person event the interlocutor shared.

In addition to the contrast made in perfective aspect, Kurtöp also encodes speaker expectation of interlocutor knowledge in tag particles. The two Kurtöp tag enclitics, *=mi* and *=wu* share the function of bringing the interlocutor into the discourse. They differ, however, in that *=mi* is used when the speaker does not expect the interlocutor to share the knowledge while *=wu* is used when the speaker does not have this expectation. As such, *=mi* tends to be used with interlocutors the speaker does not know well (such as outside researchers) while *=wu* tends to be used with close friends or village-mates.

In summary, Kurtöp presents a fascinating system of epistemicity encoded in the verbal paradigm. The categories of evidentiality (source of knowledge) and mirativity (expectation of knowledge) have been noted elsewhere. The category of interlocutor expectation, however, appears to be noted for the first time in Kurtöp. Indeed, endangered languages may have much to contribute to our understanding of epistemicity in language.

#### References:

- Aikhenvald, A. 2004. *Evidentiality*. Oxford/New York: Oxford University Press.  
DeLancey, Scott. 1997. "Mirativity: The Grammatical Marking of Unexpected Information." *Linguistic Typology* 1: 33–52.  
Hyslop, Gwendolyn. 2011. "A Grammar of Kurtöp". PhD Dissertation, Eugene, OR: University of Oregon.

# Historical Glottometry

## A wave-model approach to subgrouping

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Since its development in 1853 by August Schleicher, the family tree has become the most widely accepted model for representing historical relations between languages. And yet, it has also been an object of criticism, even among followers of the Comparative Method (e.g. Ross 1988, Bossong 2009, Heggarty *et al.* 2010), for the problematic assumptions that underlie it: (1) that the genealogy of languages can be traced back by looking exclusively at divergence, to the exclusion of convergence and diffusion; (2) that each modern language thus belongs to a single subgroup, which is itself nested in another discrete subgroup, and so on and so forth.

The tree model may be appropriate when a speaker population undergoes successive splits, with subsequent loss of contact among descendants. For all other scenarios, it fails to provide an accurate representation of language history. In particular, it is unable to deal with dialect continua, or with the language families that develop out of them—for which Ross (1988) proposed the term “linkage”. In such cases, the scopes of innovations (their isoglosses) are not nested but persistently intersect, in ways which cannot be accurately represented by any tree structure. Though Ross's initial observations about linkages concerned the languages of western Melanesia, it is clear that linkages are found in many other areas as well—such as Fiji (Geraghty 1983), Northern India (Toulmin 2009), etc.

In this presentation, we focus on the 17 languages of the Torres and Banks islands in Vanuatu, which form a linkage (François 2011), and attempt to develop adequate representations for this linkage. Our data consist of 474 linguistic innovations reflected in the area—phonological, morphological, lexical or otherwise—identified on the basis of a strict application of the Comparative Method. With these  $17 \times 474$  data points, we illustrate the method of Historical Glottometry, our proposed quantitative approach to language subgrouping in situations of linkage. One tenet of Glottometry is that innovation-defined subgroups may intersect; they define patterns that can be quantified and measured. We calculate the *cohesiveness* of each subgroup (proportion of time it is confirmed by the data), and define the relative strengths of all subgroups by calculating their *subgroupiness* (number of exclusively shared innovations weighted by subgroup cohesiveness). The result is a “glottometric diagram” of northern Vanuatu, in which the relative strengths of subgroups can be visually represented, in ways more faithful to historical reality than what the tree model can do.

Overall, we hope to show that Historical Glottometry enables a fine-grained, reliable and testable representation of language history in genealogical linkages, that combines the valuable insights of the Comparative Method with a diffusionist, non-cladistic model of language diversification.

## **Audiovisual perceptual salience of stop consonant clusters and two perceptual accounts in stop place assimilation**

This study investigates the perceptual intelligibility of consonants in intervocalic clusters (VC1C2V) to evaluate perceptual accounts of stop place assimilation. The most striking pattern found in assimilation literature is that coronals tend to assimilate to the following consonant more than labials, and labials more so than velars (Jun, 1995). Perceptual salience was suggested to cause this asymmetric pattern and it was widely accepted that the perceptually weaker sound is more prone to the assimilation (or optimization account by Steriade 2001).

However, the perceptual salience of C1 is conflated with the realization of the sounds. In Korean, the assimilation also follows the production pattern: While coronals are often deleted before C2, labials are often produced with more gestural overlap than velars in C1 (Kochetov, Pouplier & Son 2007). It is unclear, therefore, whether the greater proneness of coronals or labials to assimilation than velars is because talkers produce the sounds in phonetically reduced form, or they are indeed perceptually weak. If the former is the case, the talker enhancement account, which assumes that talkers enhance (with less gestural overlap) the perceptually weak contrast, is equally plausible (Padgett & Tabian 2005). Also, despite substantial findings that evidence the importance of C2 on the intelligibility of C1 or the role of visual properties in perception, only few have included clusters or audio-visual modality in the experiments for perceptual salience (see Winters 2001, for review). Consequently, it is unclear as to whether greater or less perceptual salience leads to greater degree of place assimilation.

We tested the perceptual salience of the sounds in clusters in both audio and audio-visual conditions in different vocalic contexts. VC and CV syllables produced by four different Korean speakers were first embedded in noise and spliced together for non-overlapping VCCV sequences. We hypothesized that listeners would find coronals in C1 less salient if their behavior followed the optimization account, while the enhancement view would find the opposite.

Thirty Korean listeners identified C1 and C2 in either audio or audiovisual presentations (audio-16, av-14). We first calculated a perceptual distance map using multidimensional scaling from a confusion matrix for each stop sound (Shepard 1972). The distance map shows asymmetric improvement with the addition of videos for labial consonants only. As a measure of perceptual salience, we calculated non-parametric sensitivity for different stop sounds in audio and audio-visual modalities for each listener (I, re-adapted from Hume et al. 1999). The Korean listeners showed significantly higher sensitivity for [k] than [t], and [t] higher than [p] in audio-only context, but no differential sensitivity in audiovisual condition. In summary, velars are acoustically more salient than labials or coronals, and labials become salient with added visual information. Taken together, we suggest that two different accounts (optimization vs. enhancement) both explains different aspects of place assimilation in Korean: Frequent deletion of coronals might be due to the weak salience of coronals, but more gesture overlap in labials might be due to talkers' knowledge of the perceptual salience that talkers reduce the more salient sounds.

## The effect of duration and glottalization on the perception of rhythm

This paper reports the outcome of an experiment that studied the influence of varying vowel duration and glottalization on listeners' preferred pairings of syllables in multisyllabic alternating sequences. Modern studies have found clear response asymmetries among listeners who were tasked with subjectively grouping sequences of alternating syllables in which duration alone was varied at different ratios: Adult speakers of English (Hay & Diehl, 2007; Crowhurst & Teodocio, to appear), French (Hay & Diehl, 2007; Bhatara *et al*, to appear), and German (Bhatara *et al*, to appear) and Italian (Bion *et al*, 2011) have been shown to prefer short-long groupings. This outcome is predicted by the Iambic/Trochaic Law, which asserts that increased duration marks group endings (Hayes 1995). However, a study conducted with speakers of Zapotec found a clear preference for counter-predicted long-short groupings (Crowhurst & Teodocio, to appear). Other recent studies have shown that when intensity and duration were varied together in the same multisyllabic sequences, intensity was a stronger predictor of subjective grouping preferences among native speakers of English, Spanish, and Zapotec (Crowhurst & Teodocio, to appear; Crowhurst 2013). The latter findings suggest that duration cues may influence listeners' perceptions of grouping more than previously thought.

Increased duration is a demarcative feature in that it has been shown to signal the ends of phonological constituents (Hayes, 1989; Gussenhoven & Rietveld, 1992; Byrd *et al* 2006) including feet (Buckley, 1998; Revithiadou, 2004). In American English, glottalization is also a demarcative, phase-final feature (Dilley *et al*, 1996; Redi & Shattuck-Hufnagel, 2001). Glottalization, also known as creakiness or laryngealization, occurs when the vocal folds are tensed, or "tightly adducted but open enough along a portion of their length to allow for voicing" (Gordon and Ladefoged, 2001, p.386). Given their similar demarcative functions and duration's demonstrated, though mixed, effect on listeners' grouping preferences, we asked whether the variations in vowel glottalization would also shape listeners' grouping preferences. Our second question was whether one of these demarcative features would emerge as a more robust predictor of grouping preferences, when the two were varied in a way that opposed them.

We presented native English speakers with multisyllabic sequences in which two alternating syllables *ba* and *ga* were varied according to three scales. In one, a length disparity was introduced between alternating modal syllables. In the second, a modal syllable was alternated with a second syllable in which the degree of glottalization was varied. Finally, a modal syllable was alternated with a creaky syllable of shorter, equal, or greater duration.

The results showed that when duration and glottalization were varied separately, participants' responses trended in favour of groupings with the long or creaky syllable in final position. Moreover, the modal-creaky grouping preference increased with the proportion of glottalization in the vowel. When creakiness and duration were opposed in the same sequences, the observed trend favoured short-long groupings, regardless of phonation.

This investigation adds to our understanding of factors that influence humans' perception of rhythm. Further research will examine how the influence of glottalization on subjective grouping is affected by the listener's native language, and in particular, languages with phonologically contrastive vowel glottalization.

## The syntax of tone in Guinean Kpelle

There are two basic models of phonology-syntax interface. According to the "standard theory" of prosodic structure as named by Selkirk (2011: 437), there is no one-to-one correspondence between prosody and syntax, and prosodic structure is organized as a syntax-independent hierarchy with strict layering of its components – intonation phrases, phonological phrases and prosodic words (Selkirk 1984; Nespor & Vogel 1986 inter alia). According to a more modern "Match" theory, there is a strong syntactic-prosodic constituency corresponding (Selkirk 2009, 2011). Phonological domains mirror syntactic constituents in that both types of structures show recursivity and level-skipping.

In this paper I present evidence based on personal field work on Guinean Kpelle, an underdescribed SW Mande language spoken in West Africa. After first showing that there are three separate prosodic domains in Guinean Kpelle, namely the word (W), phonological phrase (PhP), and intonation phrase (IP) I present instances of phonological recursivity which support the "Match" model of phonology-syntax interface.

Crucial to the argument is the fact that Guinean Kpelle is a "tonal melody language", which has six fixed lexical patterns, or "melodies": /H/, /L(H)/, /LHL/, /HL/, /L/ and /LH/ where (H) is floating H. These melodies are realized on morphemes which are normally equal to words in this isolating language. This gives us WORD as the first prosodic domain in Kpelle.

Next, there are tonal rules such as High tone spreading (HTS) in Kpelle which take place within a domain which is larger than the word, e.g. between pronominal element (in fact, an auxiliary as it can double subject NP and convey predicative meanings) and the verb. By HTS the /L/ melody becomes HL after a /H/ or /L(H)/ melody, as in (1ab) but not after the /L/ melody in (1c).

(1a) /kú pà/ => kú pâ 'we came'

(1b) /dì<sup>H</sup> pà/ => dì pâ 'they came'

(1c) /è pà/ => è pà 'he came'

Crucially, High tone never spreads rightwards from the subject NP to the auxiliary as shown in (2a), nor does it spread from the verb to an adverb (or a postpositional phrase) as in (2b).

(2a) /é lój è pà/ => é lój è pà; \*é lój ê pà; \*é lój é pâ;  
2SG child 3SG.AFF come\L  
'Your child came'.

(2b) /ɲàà<sup>H</sup> é káá làà/ => ɲàà é káá làà; \*ɲàà é káá láà  
1SG.RES 2SG see there  
'I saw you there'.

Thus the domains of High tone spread are PHONOLOGICAL PHRASES corresponding to syntactic constituents: (2a) [PhP é lój] [PhP è pà]; (2b) [PhP ɲàà é káá] [PhP làà].

Moreover, all tones in the clause undergo the downdrift rule where every next H is realized phonetically lower after L. The domain of this rule is IP corresponding to a clause.

Finally, tone domains show RECURSIVITY in Kpelle. In (1ab) H spreads from Aux to the verb. The same rule applies inside the VP when the verb is preceded by a direct object.

(3) /kú dì<sup>H</sup> kàà/ => kú dì kàà 'we saw them'

Examples (1ab) and (3) call for recursivity in the phonological phrasing: [<sub>phrase</sub> kú [<sub>phrase</sub> dì kàà]]. However, left boundary of the embedded phrase prevents *kú* from spreading its High tone rightwards: \*kú dī kàà.

After presenting examples which straightforwardly justify the three domains and the need for nesting/recursivity, I will then present more empirical data concerning the interaction between phonological and syntactic constituents in NPs and in complex predications in Guinean Kpelle.



## Three degrees of definiteness

In this paper, I explore the formal mechanisms that underlie the use of definite articles. I argue that definiteness consists of two features, familiarity (Fam) and uniqueness (*i*). These features map onto two syntactic projections, a predicative FamP, and an argumental and structurally higher *iota*P (*i*P). As a result, three degrees of definiteness arise, exemplified into three types of definite determiners: (i) fully definite determiners, which spell out both uniqueness and familiarity; (ii) underspecified definite determiners, spelling out only familiarity; (iii) expletive determiners, spelling neither of the two features. Crosslinguistic examination reveals that the determiners of each group exhibit a uniformed distribution.

Examples of underspecified definite determiners come from Greek, Scottish English, French, (Southern) German and Standard Dutch. Interestingly, the determiners of these languages most commonly may introduce: (i) proper names; (ii) kind-denoting generic nouns; (iii) and depending on language-specific parameters, e.g. *focus*, they may allow restrictive modification by other definite nominals (RMN, in Kyriakaki 2011, and ‘polydefinites’ in Kolliakou 2004, Lekakou and Szendrői 2010, among others):

- (1) a. dass *die Insekten* nicht aussterben können.  
that the Insects not become-extinct can  
'that insects cannot be extinct' (German)
- b. *\*(Les/ \*Des) dodos* sont éteints.  
The dodos are extinct- PL.  
'Dodo's are extinct.' (French)
- c. *O Jannis o ylossologyos/ to OMORFO to luluði*  
The John the linguist/ the pretty the flower  
'John the linguist'/ The flower the pretty one (Greek)
- d. *the friend the footballer*  
(Scottish English)

To account for these properties, such determiners have been argued to function as expletives (Longobardi 1994, Lekakou and Szendrői 2010). However, this claim leaves some important questions unexplained. For instance, it is not clear why such determiners do not appear in indefinite DPs, and they cannot be interpreted as such, either. Rather, in languages like in (1), existential indefinite interpretations are only possible with indefinite DPs or bare plurals. Moreover, for generics, Lyons (1999) has argued that the reference to a whole ensemble is what may characterize generics as *familiar*, and thus can be at least partially definite. With respect to RMN, RMN cannot simply be the result of a morphological spell-out, as it has been previously argued (Lekakou and Szendrői 2010), since morphology is not always present (as in Scottish). Hence, instead of dismissing the definiteness properties of the determiner altogether, I propose that a subset of these definite determiners does contribute definiteness, though only one aspect of it, familiarity. These determiners are Fam heads, forming predicative FamPs. These FamPs can easily intersect with other modifying DPs to get the uniqueness factor, while they can also be quantified over by a Gen Operator that can be in the DP or higher. Other types of definite nominals, such as null and possessive DPs, are also shown to behave alike. These are also argued to form FamPs, and thus all their properties easily follow.

In conclusion, cross-linguistically there are three types of definite determiners, corresponding to three degrees of definiteness: (i) fully specified determiners such as Standard English *the*; (ii) underspecified Fams, such as French, Greek, etc.; (iii) and true expletives, which may appear in indefinite DPs (e.g. Lithuanian, Albanian, etc.). By reviewing thus the Expletive account and by assuming a syntactic mapping of the semantic features of definiteness, the three degrees of definiteness are revealed and thus the striking similarities of these three groups of determiners are now straight-forwardly accounted for.

### Possessive Structures as Evidence for DP in West Greenlandic

**Overview:** My goal is provide evidence for the existence of a DP projection in the West Greenlandic (WG) branch of Inuit, a language that does not have articles and whose noun phrases have been previously analyzed as NPs (Compton 2004; Johns 2007, 2009; Sadock 2003). I demonstrate that despite the fact that WG lacks overt articles the D-projection does exist and it functions as a necessary part of the WG possessive noun phrase.

**Data:** WG, like other polysynthetic languages, has a strict word-internal morpheme order; the nominal domain is no exception. Generally, the nominal root precedes any of the few attached adjectival modifiers, which in turn precedes number; case-marking is final (1). In the case of possessive constructions, the possessed noun carries the possessive marking, matching its possessor in Person and Number. In (2), the fused morpheme *-a* in *ami-a* agrees with the 3<sup>rd</sup> singular possessor [3SG] *qasigissa-p* and is itself singular [SG].

- |                               |                          |                          |                        |
|-------------------------------|--------------------------|--------------------------|------------------------|
| (1) <i>iluliar-sua-q-ø...</i> | (2) <i>qasigissa-p</i>   | <i>ami-a</i>             | <i>panir-sima-su-q</i> |
| ice.berg-big-SG.ABS           | harbor.seal-SG.ERG       | skin- <b>3SG.SG(ABS)</b> | dry-PERF-ELA.INTR-3SG  |
| ‘(the) giant iceberg’         | ‘The seal skin was dry.’ |                          |                        |
| (Sommer 2005: 9)              |                          |                          | (Sommer 2005: 5)       |

Consider the paradigm in (3), which reflects absolutive morphology for possessives; the bold, underlined portions of the morphemes reflect the difference in Number between singular and plural. Within the same person (e.g. 1SG), the final part of the morpheme does not change.

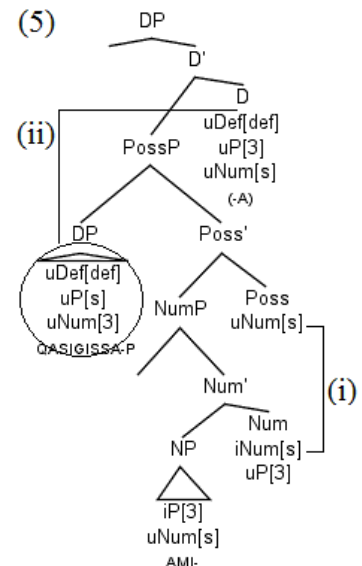
- |     |                     |                |             |     |           |     |   |
|-----|---------------------|----------------|-------------|-----|-----------|-----|---|
| (3) | Possessor           | Sg.            | Possessum   | Pl. | Possessum | (4) | a. issi = eye                               |
|     | 1 <sup>st</sup> sg. | <b>-ga</b>     | <b>-kka</b> |     |           |     | b. issi <u>ma</u> = my eye (sg. possessum)  |
|     | 1 <sup>st</sup> pl. | <b>-(r)put</b> | <b>-yut</b> |     |           |     | c. issi <u>ka</u> = my eyes (pl. possessum) |
|     | 2 <sup>nd</sup> pl. | <b>-(r)si</b>  | <b>-si</b>  |     |           |     | ("Greenlandic to English Dictionary" n.d.)  |
- (Fortescue 1984: 207)

These two pieces of data indicate that the Number of the possessum and the Person and Number of the possessor are distinct from one another; possessed Number precedes possessor features.

In view of the above data, the proposals that suggest that noun phrases in Inuit do not have a DP-layer have two shortcomings. First, possessive phrases are by default definite (Cho 2011); without a DP-internal functional layer that expresses definiteness, how is this realized? Second, how can a D-less structure account for the realization of possessive morphemes?

**Proposal:** I propose that there is a DP-layer in WG; this layer has several functions, one of which is to act as the locus for possessor features in a possessive construction. The structure for the possessive phrase in (2) is given in (5). The possessor is in the Spec of PossP, valued as definite, 3<sup>rd</sup> person, singular. The matrix DP contains the possessed noun, whose interpretable Number features value uninterpretable Number on Poss (5i). The D-head gets its features valued by the closest bundle – the possessor DP (5ii). The Agree relation between D and the possessor in SpecPossP accounts not only for the agreement between possessor and possessed, but also, more superficially, the overt morphological ordering ((3),(4)).

**Conclusion:** The argument in favor of a DP projection in WG based on DP internal agreement given here supports the Universal DP Hypothesis (generally: the D-layer is present in all languages, whether or not a given language has overt articles).



### The Pragmatics and Syntax of German Inalienable Possession Constructions

Given the use of certain verbs, German possession constructions with a PP-embedded body part as possessum come in three versions, occurring in what may seem like free variation: (1) with external possessor, (2) with internal possessor, and (3) with doubly-marked possession.

- (1) Das Kind hat ihm/ihn in die Hand gebissen.  
the child has him.DAT/ACC in the hand bitten
- (2) Das Kind hat in seine Hand gebissen.  
the child has in his hand bitten
- (3) Das Kind hat ihm/ihn in seine Hand gebissen.  
the child has him.DAT/ACC in his hand bitten

While the DAT(ive)/ACC(usative) alternation in (1) has been described and analyzed in the literature (Wegener 1985, Draye 1996, Lamiroy & Delbecq 1998, Hole 2005, Lee-Schoenfeld 2012), a comparison of all three variants, from both a pragmatic and a syntactic perspective, has not been offered. The present contribution brings together Lehmann et al.'s (2004) typological findings concerning general tendencies of encoding possessors, the results of a corpus search, and an extension of Lee-Schoenfeld's (2012) formal syntactic analysis.

Based on Lehmann et al., we argue that in German the choice between (1) the prototypical strategy of DAT-marked external possession, (2) the dispreferred (though typologically less marked) strategy of GEN(itive)-marked internal possession, and (3) the marginal strategy of doubly-marked possession depends on whether the speaker wants to emphasize the possessor's core participant role of SYMPATHETICUS, his/her non-core interparticipant role of POSSESSOR, or both. Choice of DAT vs. ACC-marking of the possessor depends on whether or not possessor and body part are analogously affected. DAT expresses non-analogous affectedness, the possessor being involved as an affected participant independently of the possessum, while ACC expresses analogous affectedness, the possessor being identified with the affected body part.

The results of our corpus search thus far support this. Using the written corpus IDS Cosmas II, testing the verbs *beißen* 'bite', *treten* 'kick', *schlagen* 'hit', *hauen* 'hit' and entering search strings like *in die Nase gebissen* 'in the nose bitten', we had a total of 62 hits (i.e. sentences containing the construction DAT/ACC pronoun + body part PP + V). Of these, 39 had DAT-marked and 23 had ACC-marked possessors, confirming that DAT external possession is the prototypical choice for expressing inalienable possession in German. Crucially, of the 23 ACC-marked possessors, 20 occurred in the context of a court or police report, i.e. an impersonal account of events, intended to be maximally neutral. This is precisely what we expect given that use of an ACC pronoun expresses analogous affectedness of possessor and body part and thereby de-emphasizes the possessor's role as independently affected participant (SYMPATHETICUS).

Strategy (3) poses an interesting challenge for Lee-Schoenfeld's (2012) possessor raising analysis of DAT external possession. We propose that, unless the inherently possessed body part nominal is coerced into an alienable possession construction (strategy (2)), it is headed by a defective D that cannot license an internal GEN possessor and therefore triggers possessor raising. Doubly-marked possession with both a DAT external possessor and an overt internal possessor, as shown in (3), can then only be the result of resumption, where not only the higher but also the lower copy of the possessor is pronounced (cf. Potsdam & Runner's (2001) discussion of resumptive pronouns in the domain of A-movement).

### Case and Agreement in Cupeño: Morphology Obscures a Simple Syntax

Cupeño (extinct Uto-Aztecan; California) displays case and agreement morphology patterns conditioned by tense: subject clitics and subject verbal agreement are in complementary distribution. The former is only realized in non-past tense, the latter only in past tense. Subject clitics display an ergative-absolutive alignment and subject agreement displays a nominative-accusative alignment. In this talk, we argue that this distribution does not arise due to variation in syntactic structure (as has been suggested for *aspect*-based ergativity splits); rather, the output of the syntactic derivation is subject to morphological constraints that obscure the syntax of the language. Contrary to previous analyses (Barragan 2003, Hill 2005), we conclude that Cupeño exhibits uniform systems of tripartite case and nominative-accusative agreement.

In non-past tense, subject clitics are realized within a clitic complex in Wackernagel's position. They display ergative-absolutive alignment, whereby the clitics of intransitive (1a) and transitive (1b) predicates are distinct forms. Verbal agreement is unrealized in non-past tense.

- (1) a. na-nxalu've-l-im=**el**                      puy-we                      b. pem-šáwi=**me**                      kwa-we  
 DUP-old.man-NPN-PL=**3pl.ABS** dine-PRPL                      3pl-bread=**3pl.ERG** eat-PRPL  
 'The old men are dining.'                      'They are eating bread.'

In the past tense, subject clitics are not realized. Instead, subject agreement morphology appears on the verb which exhibits nominative-accusative alignment as shown by its uniformity across intransitive (2a) and transitive (2b) predicates.

- (2) a. het-**pe**-yax                      b. wíchax-**ne**-n-*gal*  
 crouch-**3sg.NOM**-yax                      throw-**1sg.NOM**-in-IMP.PST.SG  
 'He crouched.'                      'I was throwing (it).'

Hill (2005) uses cases such as (1-2) to argue that Cupeño is a *tense*-conditioned split-ergative language. We see in (2a-b) and (3a-b) that the absence or presence of imperfective *aspect* morphology does not affect the alignment pattern.

- (3) a. e'e=qwe=**p**                      mix-anuk                      pex-anuk                      ne'e-y                      ni=kwel-i  
 2sg.pro=NONI=**2sg.ERG** INDEF.do-ss DEF.do-ss 1sg.pro-OBJ 1sg.ACC=get.up-in  
 'You can cure me somehow.'  
 b. e'=ep                      e-tew-'a                      Kavaly miyax-wene  
 2sg.pro=**2sg.ERG** 2sg.name-POSS Kavaly be-IMP.FUT.SG  
 'Your name will be Kavaly.'

Hill's treatment is a potential issue for cross-linguistic accounts of TAM split-ergativity, which assert that the phenomenon is uniformly conditioned by aspect (Laka 2006, Salanova 2007, Coon 2010). We argue that Cupeño is *not* a counter-example to this claim. Rather, we contend Cupeño maintains tripartite case and nominative-accusative agreement regardless of tense. Morphological restrictions, sensitive to tense, determine when these case and agreement patterns are realized.

Tense-conditioned restrictions on agreement morphology are well known. In English, past tense verbs display uniform morphology, while present tense verbs display (impoverished)  $\phi$ -agreement. In Cupeño, it is non-past tense which displays uniform (null) morphology, while past tense displays  $\phi$ -agreement. Similarly, it is well known that clitic hosts can be sensitive to feature specification. Kayne (1975) *a.o.* notes that subject clitics in French are only realized in finite clauses. In Cupeño, we posit, the clitic complex is hosted by the complementizer, and moreover, only [-past]  $C^0$  can host clitics. There is cross-linguistic evidence that  $C^0$  can be sensitive to tense. Irish complementizers (Chung & McCloskey 1987) display different forms based on the tense of the clause they embed. We thus argue that clitic and agreement morphology are both sensitive to tense specification, giving the illusion of a syntactic deviation conditioned by tense.

### Revisiting the phonology and morphosyntax of Chechen and Ingush verb doubling

The behavior of clitics been a fruitful setting for investigating matters of the syntax-phonology interface (Bošković 2001, Anderson 2005). In this paper I discuss data from Chechen and Ingush (Northeast Caucasian) in which cliticization can trigger word-level reduplication, henceforth *verb doubling*. I argue that the phenomenon in these two languages is largely phonological in nature, and show that this rare consequence of cliticization bears on the syntactic and phonological mechanisms available for controlling clitic placement.

As described by Conathan & Good (2001) and Nichols (2011), Chechen and Ingush exhibit verb doubling in which the presence of a clause chaining clitic 'a on a simple intransitive verb triggers insertion of the infinitival form of the chained verb in the subordinate clause:

- (1) Ahwmad sialxana **wa** 'a **wiina** dwa-vaghara  
 Ahmed yesterday **stay.INF & stay.ANT** DEIX-go.WP  
 'Ahmed, having stayed yesterday, left.' (Chechen)

This doubling is blocked in complex verb constructions, where a preverbal particle (2a), object (2b), or a deictic marker is present in the verb phrase.

- (2a) Ahwmada, kiexat jaaz 'a dina, zheina dueshu  
 Ahmed.ERG letter write & do.CVANT book read.PRES  
 'Ahmed, having written a letter, reads a book.' (Chechen)
- (2b) Ahwmad, zhwała 'a iacna, vilxira.  
 Ahmed dog & buy.CVANT cry.WP  
 'Ahmed bought a dog and cried.' (Chechen)

A previous analysis of the verb doubling by Good (2005) invokes a prosodic minimality constraint on verb phrases modeled after similar requirements at the word level. As in cases where syllables are reduplicated to satisfy a size requirement on prosodic *words* (McCarthy & Prince 1986), Good proposes that the reduplication is a consequence of a two-word minimality requirement on verbal phonological *phrases*. I argue that such a treatment overgenerates the set of phrasal phonological patterns, and I propose an alternative that builds upon better attested phenomena in clitic placement and phrasal phonology. That is, the clitic is generated as enclitic to the verb, but moves internal to a phonological phrase so that it is aligned to a non-final stressed element. In the absence of such a host element, the verb is doubled by the phonological component. Stress-sensitivity of clitics has previously been demonstrated in instances of promiscuous clitic attachment in Polish (Booij & Rubach 1987). Moreover, the analysis better accounts for the typological rarity of the positioning of the Chechen/Ingush clitic (Klavans 1995, Peterson 2001).

I then proceed by discussing the status of clitics and verb doubling in the context of the phonology-morphosyntax interface. The case of Chechen/Ingush will be compared to a similar phenomenon in dialects of Breton, where expletive insertion (3a), do-support (3b), and verb doubling (3c) are attested mechanisms for attaining V2 order. (Anderson 2005, Jouitteau 2012)

- (3a) Bez' ez an d' ar jardin (3b) Debrñ a ran avalou  
 EXPL R go.1sg at the garden eat.INF R do.1sg.pres apples  
 'I am going into the garden.' 'I eat apples.' (Breton)
- (3c) Redek a redan bemdez  
 Run.INF R run.1sg every.day  
 'I run every day.' (Breton)

I argue that, while similar, these instances of verb doubling must be distinguished in their implementation, one as a phonologically motivated repair, in the case of Chechen and Ingush, and the other morphosyntactic, in the case of Breton.

### The role of morphological markedness in exclusive/inclusive pronouns

Morphological marking of inclusive and exclusive (first) person (plural) is relatively frequent (WALS). Either inclusive (1) or exclusive (2) can be morphologically marked (Harbour 2011).

- |     |        |                 |                            |
|-----|--------|-----------------|----------------------------|
| (1) | PERSON | PLURAL          | <u>Inclusive marking</u>   |
|     | 1EXCL  | (in-)to'on      | (Itzaj Maya; Hofling 2000) |
|     | 1INCL  | (in-)to'on-e'ex |                            |
| (2) | PERSON | PLURAL          | <u>Exclusive marking</u>   |
|     | 1EXCL  | angi-ge         | (Limbu; van Driem 1987)    |
|     | 1INCL  | angi            |                            |

However, as noted by others, first person inclusive is a marked category (Noyer 2002, Siewierska 2004, Cysouw 2005, a.o.). While exclusive marking is attested, inclusive marking seems to be much more common (see also Harley & Ritter 2002). Furthermore, WALS notes there are a few languages that have a special pronoun for the inclusive, but the marking of the exclusive is identical to 'I'. Conversely, the reverse situation is unattested: we do not observe the combination of inclusive and 'I' while having a separate special pronoun for exclusiveness.

In this paper, we show a further asymmetry between morphological inclusive and exclusive marking. We observe pronoun suppletion in the context of the inclusive in a variety of languages, such as Evenki (3), Dumi, Sinangoro, Jarawara, amongst others.

- |     |        |          |            |   |
|-----|--------|----------|------------|---|
| (3) | PERSON | SINGULAR | PLURAL     | <u>Suppletion in the context of inclusive</u> |
|     | 1      | bi       |            | (Evenki; Nedjalkov 1997)                      |
|     | 1EXCL  |          | bu         |   |
|     | 1INCL  |          | <b>mit</b> |   |
|     | 2      | si       | su         |   |

In stark contrast, we do not observe pronoun suppletion in the context of the exclusive. An apparent counter-example is observed in Dolakha Newar; however, this case can be reanalysed as involving a phonological readjustment rule, which is discussed in the paper.

Note that suppletion in the context of both the inclusive and exclusive is also attested, in e.g. Paraguayan Guaraní (4), Manam, Boumaa Fijian, amongst others.

- |     |        |          |             |   |
|-----|--------|----------|-------------|---|
| (4) | PERSON | SINGULAR | PLURAL      | <u>Suppletion in the context of inclusive and exclusive</u> |
|     | 1      | še       |             | (Paraguayan Guaraní; Gregores & Suárez 1967)                |
|     | 1EXCL  |          | <b>ore</b>  |   |
|     | 1INCL  |          | <b>yane</b> |   |

The discrepancy between (only) the inclusive being a potential context for suppletion, while (only) the exclusive is not, can be explained by assigning a bigger role to markedness in Harbour's (2011) representation for person (*cf.* Harley & Ritter 2002, McGinnis 2005, a.o.). Harbour proposes that the two features active in the representation of person are [ $\pm$ participant] and [ $\pm$ author]. Relevant here is that, in languages that make the distinction, the **exclusive** arises by  $\llbracket +\text{author}(-\text{participant}(\phi)) \rrbracket$ , which, in effect, picks out from the total set of possible persons ( $\phi$ ) those that satisfy the features (i) [ $-\text{participant}$ ] and (ii) [ $+\text{author}$ ]. In a similar fashion, the **inclusive** arises from  $\llbracket +\text{author}(+\text{participant}(\phi)) \rrbracket$ .

We suggest here that either marked person features can govern suppletion, or both unmarked and marked person features can govern suppletion, but unmarked person features exclusively cannot govern suppletion (Calabrese 2008; *cf.* Calabrese 2005, Nevins 2010, a.o. in phonology).

Specifically, while the overt realisation of a morpheme for an unmarked (exclusive) or marked (inclusive) feature might display a trend towards expressing the marked rather than the unmarked feature, we see that operations that *access* features (such as in this case sensitivity to suppletion) categorically rule out reference to exclusively unmarked features.

## More learnable than thou?

### Testing metrical phonology representations with child-directed speech

One (often implicit) motivation for a knowledge representation (**KR**) comes from an *argument from acquisition* [13], with the idea that language acquisition is straightforward if children’s hypothesis space is defined by the correct KR (e.g., [1][3][4]). Acquisition is then the process of selecting the correct grammar from that hypothesis space, based on language input. We establish quantitative metrics for comparing KRs, based on an argument from acquisition, that assess learnability from realistic acquisition data. We conduct a computational learnability analysis [10][13] for three KRs proposed for metrical phonology and test them on English, a language that is notoriously noisy with respect to metrical phonology. We find that all three KRs have similar learnability potential, but the proposed English grammars within each KR vary on the amount of English child input data they can account for. Notably, the English grammar in all three KRs is *not* the grammar able to account for the most English child input data, even if the learner has some knowledge of the interaction between metrical phonology and morphology. This suggests learnability issues exist for the proposed English grammar, no matter what the KR, given a learner attempting to learn a generative system that accounts for as much of the input data as possible.

We investigate two parametric KRs [5][8] and a constraint-based KR [6][12] by establishing and evaluating several formally defined learnability-based metrics: (i) a grammar’s *compatibility* with ~4800 types (~100,000 tokens) of American English child-directed speech data (Brent corpus: CHILDES [11]), (ii) each KR’s *learnability potential*, given all the grammars it defines, and (iii) the *relative compatibility* of the KR’s proposed English grammar, compared against other grammars defined by the KR. English is an excellent test case for competing KRs because of its difficulty: there are numerous exceptions, so no one grammar (no matter what the KR) is compatible with all the data [13]. Moreover, there are known interactions between English metrical phonology, morphology [2][7][9], and grammatical category [6][7]. We consider both purely phonological instantiations of each KR and instantiations that include some morphological knowledge.

We find that all three KRs have similar learnability potential. In contrast, there is variation in the compatibility of each KR’s proposed English grammar, with one of the parametric English grammars performing the best. Nonetheless, all three KRs suffer from a similar problem: the English grammar’s compatibility is lower than a significant number of other grammars defined by the KR. This means an unbiased learner looking for the optimal grammar that accounts for the observed data would not choose the English grammar in any of these KRs when given English child-directed input. Interestingly, we also find that knowing English inflectional morphology is stressless does not significantly aid data compatibility, and so would not aid acquisition.

We discuss which aspects of the proposed English grammars may be hurting learnability, observing that fairly small changes in parameter values or constraint-rankings may lead to significantly higher compatibility. We additionally discuss ways a learner may still be able to learn the English grammar from English input by incorporating (i) additional linguistic knowledge about morphology and grammatical category and (ii) learning biases, such as accounting only for the stress data viewed as productive [10].

### **The rhetorics of urban Aboriginal place-making: Studying Aboriginal and non-Aboriginal relationship building in the intercultural speaking event**

Aboriginal peoples in Canada have long struggled to set the terms of their relationship with non-Aboriginal settlers and with the state more generally. Over the past 50 years, hard-fought battles over broken treaty promises and unrecognized land claims have been waged in Canadian legislatures and courts of law, sites far removed from Canada's non-Aboriginal population. As global social and economic forces bring peoples of all backgrounds to urban Canada, Aboriginal peoples and Settlers are coming face-to-face more than ever. From art galleries to cultural festivals, from museum tours to panel talks and political rallies, new fronts are opening that allow Aboriginal people to not only seek redress over state injustices, but also to perform an Aboriginal presence that challenges other, assiduous social wrongs, namely, pervasive assumptions endemic in Canadian society about the (non)place of Aboriginal culture, as a traditional culture, in modern, Western cities (See Peters, 2011). Joining the courtroom and parliament floor are Goffmanesque podium and platform events that are presenting themselves as important sites for re-writing the Aboriginal and non-Aboriginal relationship.

In Canadian cities like Montreal, Aboriginal speakers and cultural performers addressing non-Aboriginal audiences *as Aboriginal*, is increasingly frequent. But how to appreciate these events as a social force in the contemporary Canada? Performed, as they are, in and through language, they pose a particular problem for socio-linguists and discourse analysts. If language can no longer be thought of as transparent, then language researchers should be able to answer how and in what ways these public exhibits of Aboriginal culture *are or are not* changing the terms of the Aboriginal / non-Aboriginal relationship, and just what is meant by "terms" in the first place. Museology and art anthropology have attempted to untangle the social import of exhibitions culture (Clifford, 1988; Myers, 1994). But this form of analysis is rarely applied to the public address. Sociolinguists and researchers of intercultural pragmatics have been less quick to turn their attention away from language-use practices as "cultural" (even when done well, see e.g., Gee 2012; Scollon, Scollon, & Jones, 2012) and towards the conditions in which the social practice of linguistic cultural exchange is done (McDermott, 1989). The challenge is finding ways to treat difference as a linguistic achievement rather than a pre-existing state-of-affairs. The question for both anthropology and inter-cultural linguistics is not so much a question of cultural encounter as it is of cultural traffic/trafficking (Marcus & Myers, 1995).

This conference presentation will report on ongoing research into the intercultural Aboriginal address as, following Goffman, its own "form of talk", or, more specifically, a rhetorical genre (Miller, 1984). I will examine how linguistic ethnography combined with rhetorical analysis of the situation of speech might allow for an explication of the conditions, social, situational, topical, under which Aboriginal people can address non-Aboriginal audiences. Presenting preliminary findings, I will discuss approaches to understanding Aboriginal/Settler interaction as an activity in its own right and the role of the researcher to determine those things which are constitutive of it: what is/must be discussed in the intercultural moment, how must that discussion take place, and what does that mean for the Aboriginal/Settler relationship?

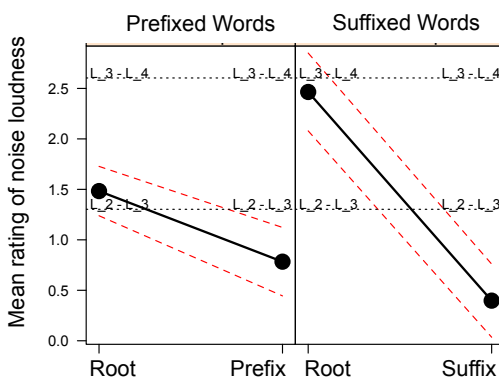


### Subjective perception of affixation: A test case from Spanish

Affixation changes our perception of a word, but in ways that we do not fully understand. Typological studies point to the prevalence of suffixation over prefixation as evidence that suffixed words provide perceptual advantages, because they place the root in initial position (Hawkins & Cutler 1988). But this idea is at odds with the experimental literature, which shows that listeners “strip” prefixes from multimorphemic words (Taft & Forster 1975), and provides evidence for a prefixation advantage: the root *pay* and the prefixed word *prepay* facilitate recognition of *payment*, but the suffixed word *payable* inhibits it (Marslen-Wilson et al. 1994; Zwitserlood, & Roelofs 1991, Feldman & Larabee 2001). Sorting out the perceptual consequences of affixation is important for models of word recognition, and could help explain problems in phonology, such as the lack of prefix-triggered alternations on roots (Hyman 2008).

The current study investigates this issue using a noise-rating task in Spanish. Participants heard Spanish phrases that had been partially overlaid with white noise, and assigned a rating indicating how loud the noise sounded, on a scale from 1 (softest) to 5 (loudest). The phrases consisted of verbs plus pronouns; the noise, indicated by strikethrough, coincided with either the prefix (~~me~~ *patea* ‘she kicks me’, *se* ~~me~~ *pisa* ‘I am stepped on’), the root, or the suffix (*patéa*~~me~~, ‘kick me’, *písa*~~melo~~ ‘step on it for me’). Spanish offers a good test case for our question because the same personal pronoun clitics, which behave phonologically like affixes (Hualde 2005, 2012), can precede or follow the verb root, and need not occur at word edges – properties that allow us to focus on affixhood per se. The noise-rating task permits a measurement of listeners’ subjective experience of the word, with the premise that listeners will experience the overlaid noise as softer when the spoken word itself seems perceptually clearer (Jacoby et al. 1988).

A speaker of Colombian Spanish recorded the words. The intensity of each root and affix was calculated separately and white noise was added accordingly at one of three signal-to-noise ratios: +24 dB, +17 dB, or +10 dB. Forty-four native Spanish-speaking participants each heard 36 target phrases, plus 80 fillers, and were asked to attend to phrase meanings during the rating task. Results, analyzed with proportional odds logistic regression, showed an interaction between Noise location and Affix type ( $\beta = -1.37$ ,  $t = -7.10$ ,  $p < 0.01$ ).



Participants rated noise on suffixed roots as very loud, suggesting diminished perceptual clarity, but rated noise on prefixed roots as relatively soft, suggesting perceptual enhancement. These findings confirm the previously reported prefixation advantage, and extend it by suggesting that prefixes facilitate priming of related words precisely because they provide listeners with enhanced perception of the root. Interpreted in light of listener-based theories of diachronic change (Ohala 1993), this finding could help to explain the lack of prefix-root phonological alternations cross-linguistically: just as certain sequences of vowels and consonants encourage misperception more than others, so do certain sequences of morphemes.

Despite the fact that each of the two branches (Timer and Aler Bender) are rather close knit

1) A

- This talk will present data from a number of languages

### **Whose Kriol is *Moa Beta*? Prestige and Dialects of Kriol in Belize**

In a creole context such as that found in the Central American-Caribbean country of Belize, the question of language attitudes and prestige is a thorny one. There are obvious complex attitude relations between the creole and the superstrate language, in this case English, which are comparable to those found elsewhere in other creole continua. Less obvious are the dimensions of prestige found among the regional varieties of the creole itself, and this is a question, which, to our knowledge, is rarely if ever asked. In this present paper, we report on just such a study of language attitudes within Belizean Creole (henceforth *Kriol*). The study was undertaken in Belize in March, April, and November 2013, and it examines attitudes toward Kriol(s), as spoken in Punta Gorda (PG) and Belize City (BC), which are located in the southernmost and northern parts of the country, respectively. The surveys administered and the data collected are completely novel in the literature, and our study is the first of any kind to address regional, language-internal attitudes and questions of prestige within Belizean Kriol.

We conducted verbal guise surveys [Kristiansen (2009, 2011)] in PG and BC, interviewing 82 participants, with 42 in BC and 40 in PG. The participant pool was split evenly between male and female in both locations. The first part of the survey was a four-level, modified Likert survey, with 16 attributes for test participants to rate, grouped by Personal Appeal, Social Correctness, Progressiveness, and Capability. The second part of the survey was qualitative and assessed native language, education level, overt attitudes toward Kriol, English and Spanish, and dialect perception. All statistical analyses were conducted in JMP 10, and each trait score was modeled using the Wilcoxon Signed Rank Test with fixed effects of speaker language variety and location, and participant gender and location.

We found that men in BC and PG preferred BC Kriol in Personal Appeal, Capability, and Progressiveness. There was no significant difference in Social Correctness among men in either location. Women from both locations rated BC Kriol higher in Personal Appeal. There was no significant difference in Social Correctness, Progressiveness, and Capability for BC women; however, PG women rated BC Kriol higher in Progressiveness.

These results invite several conclusions. Most interesting is the fact that there must be at least two regional varieties of Kriol in Belize, as participants clearly had different attitudes toward the different speakers. This claim has not been made elsewhere in the literature. Further, our results show much stronger preferences among men for BC Kriol. This preference for the more traditional variety is in line with the general notion that men are less likely to embrace linguistic change [c.f. Labov (1990, 2002)]. Also noteworthy is the overall indifference for PG Kriol. PG is much more linguistically diverse, and many of our participants were bi/trilingual, speaking some combination of Garifuna, Maya Mopan, Maya Kekchi, Spanish, or English in addition to Kriol. This differs markedly from BC, where the majority of speakers control only Kriol and perhaps English. [See Escure (1997) on this claim.] We argue that this polylinguistic context has had an impact on language change in PG; conversely, the variety spoken in the monolingual BC experiences less contact, changes less, and is thus more traditional and prestigious. This fact fits well with the emerging status of Kriol as a national lingua franca and as a marker of Belizean identity: especially at a time when the newly independent country (1981) is also experiencing high levels of immigration from neighboring Spanish speaking countries.

This paper is part of a larger project that considers attitudes toward Kriol and English among Hispanophone immigrants, among Belizeans on the Guatemalan and Mexican borders, and generational differences among Mayans in Belize. We believe that it will have important implications for governmental language planning and educational policy in the country.

### Encoding Contrast, Inviting Disapproval: The Discourse Marker *ata* in Belizean Kriol

This paper gives an account of the discourse marker *ata*, as in (1), in Belizean Kriol, which is the English-based creole spoken in the Central American-Caribbean country of Belize.

- (1) A: Wat yu deh gwaahn yestudeh, mayn?  
B: Yestudeh da-mi hoahn.  
A: **Ata** ai si yu yestudeh! Ai si yu yestudeh bai Braddick! Rait?  
A: What did you do yesterday, man?  
B: Yesterday I was at home.  
A: But I saw you yesterday! I saw you yesterday by Braddick's! Right?

This paper is the first account of *ata* given in the linguistics literature, and it relies on individually elicited data as well as 20 written surveys (adapted from Fraser [2006]), which were administered in Belize City and Punta Gorda in March and April 2013. Based on these complementary methods, we determined the following empirical account: *ata* is a contrastive discourse marker, comparable to, but much more restricted than, English *but*. It occurs only in unplanned, informal speech. It is non-truth conditional. It is required to be sentence-initial, and there is generally no pause separating *ata* from its host sentence. Thus, (2) is unacceptable with *ata*, as it is not sentence-initial.

- (2) A: Gyaadn eg gud fi yu!  
B: Ahaahn, {#**ata/bot**} Ai noh laik it!  
A: Eggplant is good for you!  
B: Yes, but I don't like it!

Further, *ata* must be used in response to something that another speaker has said—one cannot use it to contradict her own speech. It is a deictic element that requires a context with two speakers, like Fraser's (2006:197) treatment of *on the contrary* in (3) or Fillmore et al.'s (1988) pragmatic point constructions.

- (3) John is a nice guy. {#**On the contrary/but**} he is a boor.

In (4), we see *ata* in a speaker's unacceptable attempt to contrast with her own preceding speech.

- (4) Hihn seh dat mee ahn hihn da kozn. {#**Ata/bot**} mee noh rilaytid tu hihn ataal!  
'He said that me and him are cousins. But I'm not related to him at all!'

This example is especially interesting as the preceding speech is an indirect speech report, and the claim reported on is clearly false to the speaker; so, it should be worthy of an emphatic contrast.

In terms of semantics, then, we argue that *ata* encodes an emphatic contrast with some aspect of the preceding discourse, which might be part of what was said directly, indirectly, presupposed, implicated, etc. (c.f. Fraser [2009] and Toosarvandani [to appear] on *but*). This emphatic contrast is conventional but non-truth conditional, and we argue it is akin to a Gricean (1975) conventional implicature. In addition to the contrast, *ata* is very frequently used to convey speaker-disapproval—to the point that our informants claimed that it is always the case. We argue, however, in keeping the semantics minimal, that the disapproval is not conventional and that it is instead derivable as a manner implicature via Gricean reasoning. The Kriol alternative to *ata* is *bot* 'but'; however, *ata* is highly marked in terms of syntax and semantics. (*Bot* is much more neutral and can replace *ata* in any context, but the reverse is not true.) As such, it is straightforward to derive conversational implicatures of disapproval via a Gricean reasoning process such as Horn's (1984, 2004) Division of Pragmatic Labor. For Horn, a marked locution implies a marked situation, inviting addressees to draw inferences beyond what is said. A speaker's use of the marked *ata* operates in the same way. Thus, if *ata* encodes emphatic contrast, as we argue, and it is more marked than the alternative *bot*, as we show, then it is only a small inferential step from there to a disapproving or negative state of mind on the part of the speaker. *Ata*, then, is a contrastive discourse marker with a specialized syntax and no English counterpart, and it encodes emphatic contrast while inviting inferences of speaker-disapproval.

### Implicative organization facilitates morphological learning

In word-based morphology, implicative relationships among related wordforms are used to facilitate the learning of complex morphology [1,2,3]. For example, an Italian singular suffix *-a* (*persona*) typically implies a plural suffix *-e* (*persone*), while singular suffix *-o* (*gatto*) implies plural suffix *-i* (*gatti*), and vice versa. On this basis, a learner might correctly predict that a novel singular form *rosa* has the plural form *rose*. However, this perspective on morphological organization is challenged by experimental results in artificial language learning, which find that learners are unable to acquire these relationships unless they are supported by additional phonological cues in the stem [4,5]. We argue that these results were biased by ecological factors, and that implicative relations alone are sufficient to enhance paradigm learnability.

We first identify four methodological features of prior experiments that restrict general learnability: (1) passive exposure and/or rote repetition, rather than active trial-and-error learning [5,6]; (2) a requirement to learn both novel lexemes and inflections in a short time [5,7]; (3) a requirement to infer relations among abstract linguistic labels rather than referents [4,5,8]; (4) presentation of labels before their referents, which is known to delay association learning [9].

We present three novel artificial grammar experiments in which subjects demonstrate knowledge of formal paradigmatic relationships, despite experimental randomization designed to avoid redundant phonological or semantic information that would signal class membership. In Experiment 1, subjects attempted to learn how to inflect familiar nouns for number (singular, dual, plural) in an alien language. Six nouns were randomly selected from a pool of 30 household objects and divided into two classes which had suffix inflections as shown in Figure 1. In each training trial, subjects saw one, two, or many pictures of a noun and tried to guess how the aliens would refer to that set. Subjects were then given feedback and shown the correct answer.

After 90 training trials, subjects were tested on their knowledge. In each testing trial, subjects first saw one, two, or many pictures of a new, previously-unseen object, and were given its label. Subjects were then asked to label a different number of the same noun. In critical trials, the new noun was first presented in a form that reliably predicted the test form (e.g., singular *-taf* implies dual *-guk*). The results showed that subjects successfully took advantage of implicative relationships: when subjects could use two compatible suffixes for the second inflection, performance was significantly better when they were first presented with a predictive inflection than when they were not ( $p < 0.001$ ). Experiments 2-3 tested more complex paradigms with 9 nouns and 3 classes. In these paradigms, performance was better only for bidirectional relationships, where the given and unseen suffixes both implied each other ( $p < 0.01$ ).

Our results indicate that subjects acquired paradigmatic relations without redundant cues. This finding suggests that ecological factors drove previous results, which helps resolve the apparent mismatch between prior experimental and typological data [3]. Some researchers have argued that enriching word classes with additional syntactic or semantic redundancies could permit acquisition if phonological cues are inadequate [10,11,12]. However, our results indicate that learners can acquire useful paradigmatic relations without any additional supporting cues if the potential influence of domain-general learning factors is properly taken into account.

class 1		class 2	class 1			class 2	class 3	class 1	class 2	class 3
SG	chair-taf	bed-yez	chair-taf	bed-yez	table-yez	chair-taf	bed-yez	table-seb		
DU	chair-guk	bed-cav	chair-guk	bed-cav	table-cav	chair-guk	bed-cav	table-cav		
PL	chair-lem	bed-lem	chair-lem	bed-lem	table-nup	chair-lem	bed-lem	table-nup		
Experiment 1: (n=33)			Experiment 2: (n=28)			Experiment 3: (n=32)				

Figure 1: Five (in Exp. 1), six (Exp. 2), or seven suffixes (Exp. 3) were randomized to avoid phonological patterns.

### Discriminative learning predicts human recognition of English blend sources

Strict compositionality in morphological theory is problematic for explaining how language-users comprehend phenomena like the partial yet non-decomposable forms in phonaesthemes and in blends like *edutainment*. An alternative account, based on discriminative learning, proposes that language-users associate linguistic cues (e.g., short segment or letter strings) with multiple simultaneous possible lexical and grammatical meanings [1,2]. Language-users acquire associations with different strengths based on exposure to these cues in conjunction with different meanings. Association strengths are derived from the probability and frequency with which each individual cue occurs together with each meaning and with other cues [3,4]. Discriminative learning predicts that when language-users see a set of orthographic cues, the meanings that are strongly associated with those cues should be activated.

If this is how readers parse complex words, then wordforms that have cues which are better associated with the appropriate word meanings should be recognized faster and more reliably. This account, implemented as the naïve discriminative reading (NDR) model, has suggestive evidence from simulation-based analyses of online reading times [1,2], but has yet to be tested directly against human readers' comprehension abilities. In this paper, we evaluate the NDR on off-line identifications of English blend source meanings, hypothesizing that readers' ability to parse out source meanings from written blend forms should be correlated with how strongly the model associates the cues in each form with the correct source meanings.

An NDR model was trained on the wordforms and frequency data in the English CELEX database using the naive discriminative learning R package [5]. Following [1], letter unigrams and bigrams were taken as cues to word meanings. The meanings associated with each word included the lemma (lexical meaning) and the inflectional meanings listed in CELEX. For example, the meanings associated with the form *geese* were GOOSE and PLURAL.

Two experiments were conducted, using (1) attested English blends and (2) novel blends. In Experiment 1, 89 attested noun, adjective, and verb blends were taken from [6] and [7]; blends were excluded if they contained a partial form listed as productive in [8]. 100 participants, recruited via Mechanical Turk, were asked to guess the two source words that each blend was constructed from. In Experiment 2, novel blends were generated using 20 pairs of co-hyponyms (e.g., *sting* and *insult*) taken from WordNet. Four possible blends for each pair were constructed by splitting on inter-syllable or onset-rime boundaries (*insting*, *stingsult*). 100 participants were shown one possible blend from each of the 20 pairs and asked to guess its source words.

The NDR model was used to calculate the summed activation strength between the cues in each blend and its source meanings (for example, the activation of the source meanings EDUCATION and ENTERTAINMENT by the blend *edutainment*). A maximal logistic mixed-effects model was used to predict participants' success rate at guessing the sources of each blend, on the basis of these activations and a number of control variables. Crucially, NDR activation was found to be reliably predictive of participants' ability to guess blend sources, for both attested ( $p < 0.01$ ) and novel ( $p < 0.001$ ) blends. Significant control variables included the number and percentage of letters from the source word retained in the blend, the frequency of the source word, and whether the participant correctly guessed the blend's other source word.

This finding supports discriminative learning as a realistic model of how readers parse wordforms and map them to meanings. It extends previous NDR-based simulations of on-line comprehension latencies to off-line human intuitions about written word meanings. The result furthermore points towards a novel, precise account of how readers recognize partial wordforms in blends.

## **The Phonetics of Rare Sounds: Production and Perception of Aspirated Fricatives in Sgaw Karen**

Aspirated fricatives are uncommon and poorly studied sounds among world languages: for instance, only three out of 451 languages in the UPSIP database are reported as featuring the aspirated coronal fricative /s<sup>h</sup>/, the most common aspirated fricative (Maddieson 1984). As of now, no detailed phonetic study on aspirated fricatives and the nature of their aspiration has been published (Jacques 2011).

This study focuses on the production and perception of the aspirated coronal fricative /s<sup>h</sup>/ in Sgaw Karen, an under-documented language belonging to the Karen branch of the Tibeto-Burman subfamily of Sino-Tibetan languages (Benedict 1972, 127), with approximately 1,480,000 speakers in Myanmar and Thailand (Ethnologue 2012). As Sgaw Karen features an unaspirated/aspirated phonemic contrast in coronal fricatives /s s<sup>h</sup>/ and voiceless stops /p t k p<sup>h</sup> t<sup>h</sup> k<sup>h</sup>/, we are able to describe the properties of aspiration in /s<sup>h</sup>/ within the context of a phonological inventory that features multiple series of aspirated segments.

Our study found striking differences between the production of the aspirated fricative /s<sup>h</sup>/ and aspirated stops in Sgaw Karen. First, the average aspiration duration in /s<sup>h</sup>/ (40 ms) is significantly shorter than the average aspiration duration in aspirated stops (80 ms). Second, average aspiration in /s<sup>h</sup>/ is significantly longer before low vowels and significantly shorter before high vowels. This behavior is different from aspirated stops, which have been shown cross-linguistically to have increased aspiration duration before high vowels (Jongman & al. 2000; Chaida & al. 2009). Moreover, the average aspiration of /s<sup>h</sup>/ before high vowels (20 ms) brings the VOT of the aspirated fricative in this environment closer to the VOT found in unaspirated stops (22 ms). Our research provides evidence that this significant decrease in aspiration duration in /s<sup>h</sup>/ is ultimately an effect of increased frication duration, as our data shows that frication in both /s<sup>h</sup>/ and /s/ is lengthened before higher vowels, which in turn causes aspiration in /s<sup>h</sup>/ to decrease. These results suggest that aspiration and frication compete for articulatory space in the production of /s<sup>h</sup>/: aspiration decreases to compensate for the lengthened frication before higher vowels.

These findings have perceptual implications. If aspiration in aspirated fricatives is negatively affected by frication noise and, in the contexts of high vowels, /s<sup>h</sup>/ features VOT averages that are closer to those of *unaspirated* stops, what are the acoustic/perceptual cues that speakers use to distinguish aspirated fricatives from unaspirated ones? This study will include a perception experiment with Sgaw Karen native speakers. It will feature aspirated stops and fricatives with a series of synthesized aspiration durations to test 1) whether the length of aspiration is the main cue for distinguishing aspirated from unaspirated fricatives and stops or, as it has been attested for aspirated affricates (Clements & Khatiwada, 2007), other factors such as voice quality of following vowels play a key role, and 2) whether the cues for distinguishing aspirated from unaspirated stops are the same as those used for distinguishing between /s<sup>h</sup>/ and /s/.

### Toward a Comprehensive Model for Nahuatl Language Research and Revitalization

This paper discusses the methodology and strategies we are developing in order to build a comprehensive model for integrating Nahuatl research and revitalization that is being carried out within an international team project dealing both with Nahuatl and two endangered languages in Poland: Wymysiöeryś and Lemko. Although many varieties of Nahuatl culture continue to flourish in traditional communities, attesting to the strength and vitality of native traditions, the number of speakers is decreasing due to the dominant language ideology, discrimination against native speakers as well as the widespread denial of the continuity between ancient cultures and contemporary indigenous traditions.

The most important aspect of our revitalization strategy involves creating an educational model in which native speakers of Nahuatl can develop their intellectual and creative capacities within their own language and culture. We have created a monolingual space for conducting teaching, carrying out research and designing revitalization projects at a Mexican university, and in two years we will found a university degree program conducted entirely in Nahuatl. Our students are currently compiling extensive language documentation of both a historical (archival texts) and a contemporary (digital recordings) nature, not as informants, but as peers alongside Western researchers. We are in effect restoring the long interrupted tradition of literacy in Nahuatl: native speakers again will have access to the vast corpus of colonial writing produced by their ancestors, and will be able to resume the exploration of their historical identity. They have also started preparing and publishing modern literature, reference works, scientific studies and critical editions of Classical texts in our new monolingual editorial series. And finally, we are breaking down perceived barriers to communication by sponsoring interdialectal encounters for speakers of Nahuatl.

An essential part of our strategy is to raise awareness among both indigenous and non-indigenous people alike of the results of current research in cognitive linguistics and psycholinguistics showing the benefits of multilingualism. Recent research demonstrates strong influence of language on cognition and especially suggests that differences in language structure result not only in differences in construal, but are also significant for the performance of nonlinguistic tasks and activities (Lucy 1992, 1996; Levinson 1996; Kövecses 2006). These results are further supported by psycholinguistic research that demonstrates a strong correlation between multilingualism and enhanced non-verbal processes, such as greater flexibility and capacity for task-solving and in generally higher intellectual and social skills (Bialystok 1999; 2001; Bialystok and Martin 2004; Bialystok and Senman 2004; Bialystok, Craik, Luk 2012; Costa, Hernández and Sebastián-Gallés 2008; Kovács 2009). All this should become a significant part of a comprehensive educational policy within native communities and the broader society, raising general awareness of the benefits of multilingualism and cross-cultural transfer and thus providing a strong rationale for programs of language revitalization.

Summing up, our proposal for the revitalization of Nahuatl that is being implemented by an international team, combines several complementary strategies: linguistic research; new forms of collaboration with indigenous scholars, students and members of native communities; international collaboration and exchange between members of groups striving for the preservation of their languages; strengthening historical identity and positive language attitudes through restoring the culture of literacy and publishing monolingual research materials; development of new models of teaching, including the creation of monolingual university programs; and raising awareness of the benefits of multilingualism and cross-cultural exchange.



BLS abstract

special session: Approaches to the Syntax-Phonology Interface

## The prosody of split and glued verb constructions in Chácobo (Pano)

Panoan languages have been described as highly synthetic and suffixal (Loos 1999). These languages, and languages of the Amazon generally, have also been described as having “syntax like” morphology. For instance some morphemes can occur with variable morpheme ordering (Guillaume 2010, Payne 1990). The following example from Chácobo demonstrates this phenomenon.

- (1) a. *hāβà-kārà-tíkì-kì*  
run-DUB-AGAIN-CMPL  
‘He probably ran again.’

- b. *hāβà-tíkì-kàrà-kì*  
run-AGAIN-DUB-CMPL  
‘He probably ran again.’

Chácobo seems to go even further than other Panoan languages in straying from the canonical polysynthetic verb. The verb complex can be divided into two types. One is the “glued” construction as in (2a) and the other is the “split” construction as in (2b). Chácobo is a verb-final language. In the split construction the verb stem (underlined) splits off from TAM morphemes and moves closer to the front of the sentence.

- (2) Glued construction  
a. *yōṣa hōni titikáa tsáyà-tíkì-yámi-kì*  
woman man tall see-AGAIN-HEST-CMPL

- Split construction  
b. *yōṣa tsáyà-tíkì hōni titikáa wā-yámi-kì*  
woman see-AGAIN man tall TR-HEST-CMPL  
‘The tall man saw the woman again yesterday.’

The existence of the split construction in Chácobo poses some distributional problems for the analysis of the verb complex. Some morphemes can occur attached to both sides of the verb complex, while others obligatorily occur on one side or the other (Tallman 2013). A detailed analysis of these morphemes suggests that the verb complex should be analyzed as bipartite (cf. McDonough 2000 for the bipartite Athabaskan verb). In this paper I argue that Chácobo has incipient synthesis. The distributional characteristics of the verb complex suggest a particular reanalysis channel from more analytic to a polysynthetic verb.

Most prosodic domains, in the sense of Nespor & Vogel (2007[1986]), are defined in terms of supra-segmental categories and processes (Gonzalez *forthcoming*, Tallman *forthcoming*, 2013, Elias-Ulloa 2006). This paper gives a description of prosodic domains in the verbs complex of Chácobo and concludes that the verb complex contains at least two prosodic domains (Tallman 2013). It is argued that the prosodic phenomena of Chácobo, like its morpho-syntax, suggest a reanalysis pathway from multiple prosodic domains to one prosodic word over the word complex. It is argued that the reanalysis of prosodic domains is an integral part of the evolution of poly-synthesis.

# Only and focus in Imbabura Quichua

Abstract for BLS 40 (Parasession on Semantic Theory in Underdescribed Languages)

*Keywords:* exclusive particles, focus, focus association, Quechua

This paper analyzes the behavior of the exclusive particle *-lla* ‘only’ [ʒa] in Imbabura Quichua (henceforth Quichua), a Quechuan language spoken in Northern Ecuador (Cole 1982). All reported data are obtained from fieldwork with a native speaker consultant. Typologically speaking, Quichua constitutes a relatively uncommon language with respect to its behavior with focus: first, its focus realization is non-phonological (the current fieldwork supports earlier claims to this effect, e.g. Muysken 1995; Muntendam 2012). Second, alternative-sensitive particles such as *-lla* are suffixes instead of adverbial items (König 1991: §2.2). This gives rise to questions about how *-lla* associates with its scope. My analysis proposes a structural association, not related to the focus marker *-mi*. Furthermore, the scope of *-lla* is shown to not always correspond to the stem it attaches to, as in the basic example in (1):

- (1) a. Ñukanchi-ka karamilu-ta-ka wawa-kuna-man-**lla**-mi kara-nchi.  
 we-TOP sweets-ACC-TOP child-PL-to-EXCL-FOC give-1PL  
 ‘We only give sweets to [children]<sub>F</sub>’  
 b. Karamilu-kuna-**lla**-ta-mi wawa-kuna-man-ga kara-nchi.  
 sweets-PL-EXCL-ACC-FOC child-PL-to-TOP give-1PL  
 ‘We only give [sweets]<sub>F</sub> to children’

The Quechuan ‘focus marker’ *-mi* is well studied, although most interest has been in its evidential uses (e.g. Faller 2002, 2003). I show that *-lla* does *not* always associate with a *-mi* marked focus (unlike (1)). For instance, *-lla* can occur inside the scope of negation, where *-mi* is not licensed for independent reasons (cf. Faller 2002). I argue that its association with alternatives instead occurs in a structural fashion, viz. to the stem *-lla* attaches to (cf. Hartmann and Zimmermann 2008 for Bura). Focal under-determination is found in complex NPs, where *-lla* must attach to the head noun, but its semantic scope is ambiguous:

- (2) Azul ruwana-kuna-ta-lla-mi gushta-ni.  
 blue poncho-PL-ACC-EXCL-FOC like-1SG  
 ‘I only like [blue]<sub>F</sub> ponchos’ / ‘I only like [blue ponchos]<sub>F</sub>’

In my analysis *-lla* attaches at the NP level, and generates all alternatives there (cf. Turkish, Göksel and Özsoy 2003). *-lla* has selectional restrictions, and I show it has a different, non-exclusive meaning when it attaches to adjectives or verbs. Special morphosyntax indicates a verb or an adjective is in the scope of the exclusive particle: cognate object and reduplication.

- (3) a. Puñu-y-lla-ta-mi puñu-sha. b. Marya-ka llaki-lla-mi llaki.  
 sleep-NZR-EXCL-ACC-FOC sleep-FUT.1SG Maria-TOP sad-EXCL-FOC sad  
 a. ‘I will only [sleep]<sub>F</sub>’ b. ‘Maria is only [sad]<sub>F</sub>’

These are analyzed as different structural associations, due to additional meanings of *-lla*. In conclusion, these novel data and analysis contribute to the study of Quechuan ‘focus marker’ *-mi*, and also illustrate how focus semantics applies to typologically marked languages.

### Stative vs. eventive predicates and $\nu$ P-internal structure

We argue that while eventive predicates have inner aspect between little  $\nu$  and V projections (MacDonald 2009), stative predicates lack inner aspect, (1). This predicts that, across all languages, there is a  $\nu$ P-internal structural difference as in (1a-b); in particular, we expect to find syntactic contexts that are sensitive to the structural contrast between eventives  $\nu$ Ps (which have inner aspect) and stative  $\nu$ Ps (which lack inner aspect). This is confirmed by data from Javanese (Austronesian) and English (Germanic). In Javanese, eventive VPs undergo VP-topicalization (2a), but stative VPs do not (2b). In English, eventive VPs are compatible with three types of VP-ellipsis — namely *do so too*, *so do* or *do too* (3a) — but stative VPs are compatible with only two types of VP-ellipsis; notably they are illicit with *do so too* ellipsis, (3b).

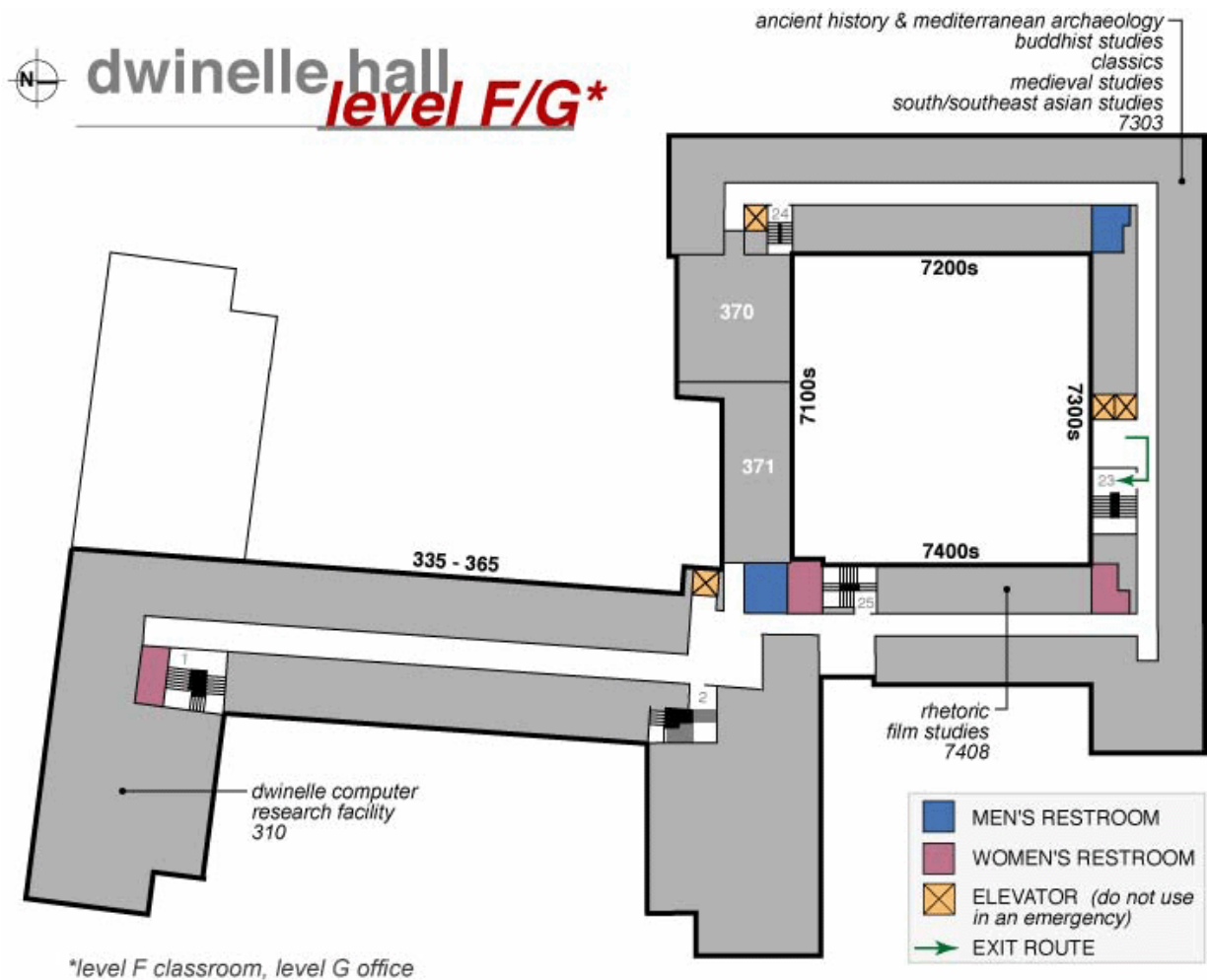
- (1) a. [ $\nu$ P ARG [ $\nu$  [ $\nu$ P V ARG ]]] STATIVE  $\nu$ P-SHELL  
 b. [ $\nu$ P ARG [ $\nu$  [ASPECT [ $\nu$ P V ARG ]]] EVENTIVE  $\nu$ P-SHELL
- (2) a. **nggotong** watu-ne, cak Kholiq iso EVENTIVE  
 AV.lift rock-DEF Mr. Kholiq CIRC.POSS  
 ‘Lift the stone, Kholiq can.’  
 b. Context: Can Adi remember his grandfather’s story?  
 \***eling** cerito-ne mbah-e Adi, Mas Adi iso STATIVE  
 remember story-DEF grandfather-DEF Adi Mr. Adi CIRC.POSS  
 (‘Remember his grandfather’s story, Mr. Adi can.’)
- (3) a. Lucy eats meat, and Sally {**does so too** / so does / does too}. EVENTIVE  
 b. Lucy likes meat, and Sally {\***does so too** / so does / does too}. STATIVE

The event/state partition in (2) and (3) falls out in an analysis that capitalizes on their structural distinction together with: (i) independently motivated anti-locality constraints (Abels 2003); and (ii) the status of  $\nu$ P as a phase (Chomsky 1995; Legate 2003; Sato 2012) for extraction.

Consider the event/state distinction in Javanese, (2). By hypothesis, eventive and stative predicates merge in V in Javanese. Anti-locality states that a complement of a head  $\alpha^0$  cannot move to the specifier of the same head  $\alpha^0$  (Abels 2003). For a VP to move to the CP-domain to derive VP-topicalization, it must extract from the  $\nu$ P phase via the edge of  $\nu$ P. This is possible for eventive VPs, as the inner aspect projection ensures that VP movement to the left-edge of the  $\nu$ P phase satisfies anti-locality. In contrast, for stative VPs, such movement violates anti-locality since VP, the complement of  $\nu^0$ , would move to the specifier  $\nu$ P. This analysis generalizes to other event/state partitions in Javanese such as subject-auxiliary answers, where only the eventive VP can first extract as in VP-topicalization and then is phonologically deleted.

For English, *do* associates with tense ( $\nu$ P-external) or inner aspect ( $\nu$ P-internal). In its  $\nu$ P-external position, *do* is predictably insensitive to the state/event distinction, corresponding to *so do* and *do too* ellipsis. In its  $\nu$ P-internal position, *do* is hosted by inner aspect, and so is predictably found only with eventive verbs; this corresponds to *do so* ellipsis, (3). Following Johnson (2001), we treat English ellipsis as topicalization followed by deletion, but depart from him in distinguishing  $\nu$ P-ellipsis (*so do* and *do too* ellipsis) from VP ellipsis (*do so* ellipsis). This correctly predicts the parallel behavior of English and Javanese: in both languages VP-fronting is blocked with statives, but permitted with eventives; the former violate anti-locality, the latter do not. This account of *do so* ellipsis also accounts for its inability to host a variable (*I know which book Emily wrote and which book Rosa didn’t (\*do so)*) as well as its incompatibility with antecedent contained deletion (*Dulles suspected everyone who Angleton did (\*so)*). Both cases involve VP-movement, and VP-movement (that occurs with *do so*) violates anti-locality; the  $\nu$ P-movement (that occurs with *do*) does not.

## Conference Venue



Enter Dwinelle Hall from the main entrance near Sather Gate, and go right towards the elevator, which will be on your left. Take this to Level F/G for registration in room 371, which is behind you as you exit the elevator. Dwinelle 370, where half of the conference talks are held, is just beyond 371. Other talks will be in room 3335 on Level C. To get there, take the elevator outside of 371 to Level C, then go left down the hallway. 3335 is at the end of this hall; if the door is closed, please knock. If you use the elevator on the other side of room 370 (at the top of the map), take it to Level C, then exit to the right and follow the corridor around to 3335.

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Cheeseboard  
Chez Panisse

### **South Side**

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Thai Noodle 2  
Smart Alec's  
Joshu-Ya  
"Asian Ghetto" (Durant Ave.)

### **Wast Side**

Saturn (Vegetarian/Vegan)  
Cancun  
Crunch  
Alborz  
Le Regal  
Ipukku  
Gather  
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Revival  
Slice  
Five (Shattuck Hotel)  
Platano  
Brazil Cafe  
Bobby G's Pizzeria

## **Cafes**

### **North Side**

Brewed Awakening  
Nefeli Cafe  
Philz  
Guerilla Cafe

### **South Side**

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Musical Offering (no wifi)

### **West Side**

Starbucks

Yali's

PiQ

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Thalassa

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