

CHICAGO  
LINGUISTIC  
SOCIETY

F I F T Y   T H R E E

**The 53<sup>rd</sup> Annual Meeting of the Chicago Linguistic Society**

**May 25-27, 2017**



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# Welcome

Welcome to the 53<sup>rd</sup> Annual Meeting of the Chicago Linguistic Society. We are very fortunate this year to have so many eminent presenters including our invited speakers: Lucas Champollion, Itamar Francez, Thomas Graf, Sun-Ah Jun, Audrey Li and Josep Quer.

In all, we have eleven stimulating sessions covering a broad spectrum of current topics, with special parasessions on Computational/Mathematical Linguistics, Cross-linguistic Quantification, East Asian Linguistics, Intonation and Prosody, and Sign Language Linguistics.

The conference is being held 25-27 May, 2017, in Ida Noyes Hall at the University of Chicago (1212 East 59th Street, Chicago, IL 60637). Registration is at 8:30am all three days, with opening remarks scheduled for 9:45am Thursday. We cordially invite all graduate students to attend our Graduate Student Mixer at 7:00pm Thursday and we sincerely hope to see everyone at the closing banquet, 6:00pm Saturday, which will feature the ever-popular karaoke, with some interesting performances.

This year at our book table, CLS is pleased to offer a great assortment of topical books and journals at discounted prices; publications are from John Benjamins, the MIT Press, the Cambridge University Press, the University of Chicago Press and Springer. Also available are editions of previous CLS proceedings.

Lastly, to our invited speakers, all presenters and attendees, welcome, thank you for coming, and enjoy the conference!

# Schedule

## Day 1 Schedule (Thursday, May 25)

All events held in Ida Noyes Hall (1212 E. 59th St.).

**Invited talks, Registration & East Asian Session:** Theater, 3rd floor

**Left column:** West Lounge, 2nd floor

**Right column:** East Lounge, 2nd floor

8:30-9:45	REGISTRATION	
9:45-10:00	OPENING REMARKS	
<b>Special Session: EAST ASIAN LINGUISTICS</b>		
10:00-10:30	<b>Kenji Oda</b> (Syracuse): Syntax of Proper Names in Japanese	
10:30-11:00	<b>Jianrong Yu</b> (University of Arizona): Deriving Mandarin Verb-doubling Resultative Compounds at the Syntax-morphology Interface: Manner Incorporation and M-merger	
11:00-11:15	BREAK	
11:15-11:45	<b>Toru Ishii</b> (Meiji): Japanese ‘Gapless Relative Clauses’: A Movement Approach	
11:45-12:15	<b>Lukas Rieser</b> (Kyoto)	& <b>Rihito Shirata</b> (JSPS / University of the Ryukyus): ‘Why’ without reasons: ‘wh’-exclamatives in Kikaijima Ryukyuan
12:15-1:15	LUNCH	
1:15-2:15	<b>Invited Speaker: Audrey Li</b> (USC) Argument ellipsis and structures of noun phrases	
2:15-2:30	BREAK	
<b>Special Session:</b> INTONATION & PROSODY		<b>General Session</b> SYNTAX
2:30-3:00	<b>Jason Ostrove</b> (UC Santa Cruz): The Morphology-Prosody Interface in San Martín Peras Mixtec	<b>Edward Rubin</b> (University of Utah): Ad- verbial Nominals and Case
3:00-3:30	<b>Hossep Dolatian</b> (University of Delaware): Armenian prosody: A case for prosodic stems	<b>Matthew Tyler</b> (Yale): Choctaw PCC re- pair: Basque-style PCC repair in a language with no dative
3:30-3:45	BREAK	
3:45-4:15	<b>Shu-hao Shih</b> (Rutgers): On the Inter- action between Phrase-final Lengthening and Prosodic Structure	<b>Steven Foley, Nick Kalivoda &amp;</b> <b>Maziar Toosarvandani</b> (UC Santa Cruz): Forbidden clitic clusters in Zapotec: Implica- tions for the Person–Case Constraint
4:15-4:45	<b>David Yoshikazu Oshima</b> (Nagoya): The prosody of positively biased negative po- lar interrogatives in Japanese: Post-focal re- duction or deaccenting?	
4:45-5:00	BREAK	
5:00-6:00	<b>Invited Speaker: Sun-Ah Jun</b> (UCLA) Intonational difference in syntax-marking vs. focus-marking prosodic phrasing	
7:00	GRADUATE STUDENT MIXER	

## Day 2 Schedule (Friday, May 26)

All events held in Ida Noyes Hall (1212 E. 59th St.).

**Invited talks & Registration:** Theater, 3rd floor

**Left column:** West Lounge, 2nd floor

**Right column:** East Lounge, 2nd floor

8:30-9:00		REGISTRATION	
<u>Special Session:</u>		<u>General Session</u>	
COMPUTATIONAL/ MATHEMATICAL LINGUISTICS		EXPERIMENTAL LINGUISTICS	
9:00-9:30	<b>Alëna Aksënova &amp; Aniello De Santo</b> (Stony Brook): Strict Locality in Morphological Derivations	<b>Anne Pycha</b> (UW Milwaukee), <b>Sharon Inkelas</b> & <b>Sarah Bakst</b> (UC Berkeley): Why do morpheme-internal segments resist alternations? A word-learning experiment	
9:30-10:00	<b>Yu Tomita</b> (Sokendai): Towards a pied-piping account for wh-scope within compositional event semantics in minimalism	<b>Morwenna Hoeks</b> , <b>Grzegorz Lisowski</b> , <b>Jonathan Pesetsky</b> & <b>Alexandre Cremers</b> (ILLC, University of Amsterdam): Experimental Evidence for a Semantic Account of Free Choice Disjunction	
10:00-10:15		BREAK	
10:15-10:45	<b>Hyunah Baek</b> (Stony Brook): Computational representation of unbounded stress: tiers with structural features	<b>Eli Asikin-Garmager</b> (Iowa): Where's my verb? Insights from experimental Austronesian syntax for universal production biases	
10:45-11:15	<b>Jonathan Dunn</b> (Illinois Institute of Technology): Recursively Emerging Structure: A Discovery-Device CxG	<b>Savithry Namboodiripad</b> , <b>Dayoung Kim</b> (UC San Diego) & <b>Gyeongnam Kim</b> (Sogang): English-dominant Korean speakers show reduced flexibility in constituent order	
11:15-11:45	<b>Hossep Dolatian &amp; Jeff Heinz</b> (University of Delaware): Reduplication and Finite-State Technology	<b>Andrea Beltrama</b> , <b>Erlinde Meertens</b> & <b>Maribel Romero</b> (Konstanz): Polar Questions, or not Alternative Questions and Complement Alternative Questions: A Comparative Study	
11:45-12:45		LUNCH	
12:45-1:45		<b>Invited Speaker: Thomas Graf</b> (Stony Brook) It's a (Sub-)Regular Conspiracy: Locality and Computation in Phonology, Morphology, Syntax, and Semantics	
1:45-2:00		BREAK	
<u>Special Session:</u>		<u>General Session</u>	
SIGN LANGUAGE LINGUISTICS		PHONETICS & PHONOLOGY	
2:00-2:30	<b>Natasha Abner</b> (Montclair), <b>Helen Koulidobrova</b> (Central Connecticut), <b>Ronnie Wilbur</b> , (Purdue) & <b>Sandra Wood</b> (McDaniel): Don't miss the BEAT!: Exceeds Comparatives in American Sign Language	<b>Sam Tilsen</b> (Cornell): Social distance correlates with similarity in linguistic behavior	
2:30-3:00	<b>Laura Horton</b> , <b>Lilia Rissman</b> , <b>Susan Goldin-Meadow</b> & <b>Diane Brentari</b> (University of Chicago): The Emergence of Agent-Marking Strategies in Child Homesign Systems	<b>Eleanor Glewwe</b> (UCLA): Substantive Bias in Phonotactic Learning: Positional Extension of an Obstruent Voicing Contrast	
3:00-3:15		BREAK	

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3:15-3:45	<b>Meltem Kelepir, Asli Özkul &amp; Elvan Tamyurek Ozparlak</b> (Bogazici University): Expressing the clusivity distinction in non-specific indefinite pronouns in Turkish Sign Language (TİD)	<b>Nick Danis, Eileen Blum, Luca Iaconi, Hazel Mitchley &amp; Adam Jardine</b> (Rutgers): A computational method for evaluating theories of phonological representation
3:45-4:15	<b>Jonathan Rawski</b> (Stony Brook): Phonological Complexity is Subregular: Evidence from Sign Language	<b>Gasper Begus</b> (Harvard): Historical Probabilities of Alternations
4:15-4:30	BREAK	
4:30-5:30	<b>Invited Speaker: Josep Quer</b> (Universitat Pompeu Fabra) The right place for locative agreement in sign languages	

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### Day 3 Schedule (Saturday, May 27)

All events held in Ida Noyes Hall (1212 E. 59th St.).

**Invited talks & Registration:** Theater, 3rd floor

**Banquet:** Cloister Club, 1st floor

**Left column:** West Lounge, 2nd floor

**Right column:** East Lounge, 2nd floor

8:30-9:00	REGISTRATION	
	<b><u>Special Session:</u></b>	<b><u>General Session:</u></b>
	CROSS-LINGUISTIC QUANTIFICATION	
9:00-9:30	<b>Hsiu-Chen Daphne Liao</b> (National Chiao-Tung): The cumulative and distributive readings expressed by Chinese collectivizing adverbial <i>yiqi</i>	<b>Till Poppels &amp; Andrew Kehler</b> (UC San Diego): Verb Phrase Ellipsis is discourse reference: novel evidence from dialogue
9:30-10:00	<b>Yimei Xiang</b> (Harvard): <i>Wh</i> -items quantify over polymorphic sets	<b>Matthew Barros &amp; Hadas Kotek</b> (Yale): Ellipsis licensing in sluicing: A QuD account
10:00-10:15	BREAK	
10:15-10:45	<b>Patrick Elliott</b> (UCL), <b>Andreea Nicolae &amp; Uli Sauerland</b> (ZAS): Sorting out who's who: higher-order quantification and the interpretation of number cross-linguistically	<b>Tom Roberts</b> (UC Santa Cruz): Responsive Predicates are Question-Embedding: Evidence from Estonian
10:45-11:15	<b>Haoze Li</b> (NYU): Relative measurement in event-related domains: Evidence from Mandarin	
11:15-11:30	BREAK	
11:30-12:30	<b>Invited Speaker: Lucas Champollion</b> (NYU) Stratified reference: a unified perspective on distributivity across constructions and languages	
12:30-1:30	LUNCH	
	<b><u>General Session:</u></b>	<b><u>General Session:</u></b>
	SEMANTICS	
1:30-2:00	<b>Mary Moroney</b> (Cornell): A semantic model of switch reference in Koasati	<b>Robert Borges &amp; Justyna Olko</b> (University of Warsaw): Locus of Marking in Nahuatl and Spanish: contact-induced morphological change
2:00-2:30	<b>Emma Nguyen</b> (UConn) & <b>Lisa Pearl</b> (UC Irvine): Do You Really Mean It? Linking Lexical Semantic Profiles and the Age of Acquisition for the English Passive	<b>Josh Phillips</b> (Yale): Apprehensionality emerging: The case of Kriol <i>bambai</i>
2:30-2:45	BREAK	
2:45-3:15	<b>Matthias Lalis</b> (Johns Hopkins): Plurivaluationist semantics for absolute gradable predicates	<b>Yenan Sun</b> (University of Chicago): Two Kinds of Quantificational Domains: Mandarin <i>mei</i> with or without <i>dou</i>
3:15-3:45	<b>Xiao Li &amp; Hongyong Liu</b> (Queens College): Subjectivity and Gradability: on the semantics of the possessive property concept construction in Mandarin Chinese	
3:45-4:00	BREAK	
4:00-5:00	<b>Invited Speaker: Itamar Francez</b> (University of Chicago) Love and Happiness [Joint Work with Andrew Koontz-Garboden]	
6:00	BANQUET	

# Invited Speakers

**Lucas Champollion** is Assistant Professor of Linguistics at New York University. His research deals with linguistic aspect, overt and concealed distributivity, counterfactual expressions, and the semantics of expressions referring to events, among other topics. His work has been published in *Semantics and Pragmatics*, *Theoretical Linguistics*, *Journal of Semantics*, and *Linguistics and Philosophy*.

**Itamar Francez** is Assistant Professor of Linguistics at The University of Chicago. His research focuses on natural language meaning, specifically using logical tools to model the intuitions of speakers and explain the relation between meaning and form. Recent interests include the interaction between conventional linguistic meaning and pragmatic reasoning. His work has been published in *Semantics and Pragmatics*, *Natural Language and Linguistic Theory*, *Natural Language Semantics*, and *Linguistics and Philosophy*.

**Thomas Graf** is Assistant Professor of Linguistics and Affiliate Professor in the Institute for Advanced Computational Science at Stony Brook University. He has worked on a wide range of topics in phonology, morphology, and syntax, connected by the idea of determining the complexity of patterns in natural language. His main research area is computational syntax - in particular, computational models of syntactic constraints - approached from the perspective of the formalism of Minimalist Grammars. His work has appeared in *Gloss* and *Formal Grammar* among others.

**Sun-Ah Jun** is Professor of Linguistics at the University of California, Los Angeles (UCLA). Her research focuses on various aspects of intonation and prosody, including intonational phonology, prosodic typology, and the way intonation and prosody interact with other subareas of linguistics. Her journal articles have appeared in the *Journal of Phonetics*, *Studies in Second Language Acquisition*, *Language and Speech*, *Language and Cognitive Processes*, and the *Journal of East Asian Linguistics*, among numerous others.

**Audrey Li** is Professor of Linguistics and East Asian Languages and Cultures at the University of Southern California. Her research interests lie in syntactic theory, the syntax-semantics interface, and the syntax-phonology interface, with particular reference to Chinese languages. Some of her recent research topics include Case, ellipsis, and the Chinese particle *de*. Her works have appeared in *Language*, *Lingua*, *Linguistic Inquiry*, and *Journal of East Asian Linguistics*, and she has co-authored various monographs published by the Cambridge University Press, Kluwer/Springer, and the MIT Press.

**Josep Quer** is Research Professor of Linguistics at the Universitat Pompeu Fabra in Barcelona. His research interests are concentrated around negation, agreement and quantification in both signed and spoken languages, with focus on morphosyntax, semantics and prosody. He is a leading figure in sign language linguistics and was the chair of the European Union COST Action ‘SignGram’, a multi-national collaboration to study and compare the linguistic structures of European sign languages, and to protect the linguistic heritage of the Deaf. His works have appeared in *Lingua*, *The Linguistic Inquiry* and *Theoretical Linguistics*.

# Invited Talks

## **Stratified reference: a unified perspective on distributivity across constructions and languages**

Lucas Champollion (New York University)

Saturday, 11:30-12:30, Theater

This talk summarizes my recent book (*Parts of a Whole*, 2017, vol. 66 of the series *Oxford Studies in Theoretical Linguistics*, see <http://nyu.edu/projects/champollion/book/>), with special attention to cross-linguistic quantification, the topic of one of the special sessions at CLS 53. My work brings together several strands of research on semantic and pragmatic phenomena in order to propose a comprehensive theory of distributivity, atelicity, plurality, and the count/mass distinction. I start by answering the question *What is distributivity?* in several related ways: distributivity is a property of predicates, of quantifiers, of constructions, or a relation between constituents, and of constructions. I build on these notions to argue that the term *distributivity* applies to a variety of constructions, such as adverbial *each*, *for*-adverbials, and pseudopartitives. Building on a common thread that runs through these constructions, I propose a constraint that explains why they reject collective and telic predicates, singular count nouns, and nonmonotonic measure functions. To capture this constraint, I develop *stratified reference*, a parametrized notion whose core idea is that if a predicate applies to something, it must also apply to its parts along some dimension and down to a certain level of granularity. Stratified reference generalizes and relates two core concepts in algebraic semantics: higher-order properties such as Krifka's divisive reference and Dowty's subinterval property, and distributive operators such as Link's D and Schwarzschild's Part. On this basis, I develop a formal account of distance-distributive constructions across languages, such as English adnominal *each*, German *jeweils*, or distributive numerals. The common core of these constructions as well as their crosslinguistic variation can be captured by varying the dimension and granularity parameters of stratified reference.

## Love and Happiness

Itamar Francez (University of Chicago)

Saturday, 4:00-5:00, Theater

[Joint work with Andrew Koontz-Garboden]

We don't know what love is, but in this talk we make a proposal for how to derive happiness. Specifically, building on the theory of property concept nouns as denoting qualities (a particular kind of mass) advanced in our recent book (Francez and Koontz-Garboden 2017), we propose a compositional account of English deadjectival nominalization like *happiness*, *strength*, and *depth*, on which the derivational suffixes are systematically ambiguous, and the interpretational possibilities for the derived noun are predictable from the meaning of the deriving affix and that of the element (root or adjective) it combines with, as anticipated on a view of grammar that recognizes the lexicon as an important locus of generalizations. We demonstrate that the resulting analysis makes several surprising and correct predictions, including some cross-linguistic ones, and speculate about how our happiness might relate to love.

## It's a (Sub-)Regular Conspiracy: Locality and Computation in Phonology, Morphology, Syntax, and Semantics

Thomas Graf (Stony Brook University)  
Friday, 12:45-1:45, Theater

It is commonly believed that phonology, morphology, syntax, and semantics are distinct modules of language, governed by very different principles with little common ground. Nonetheless several approaches (e.g. Government Phonology, Distributed Morphology) subscribe to the idea that at least some of these language modules exhibit profound parallels. Interestingly, recent findings in computational linguistics corroborate this hypothesis: it seems that linguistic dependencies belong to a small, heavily constrained region of the so-called *subregular hierarchy*. If correct, this has far-reaching typological implications, sheds new light on learnability issues, and raises deep questions about the cognitive architecture of language.

The subregular hierarchy provides a system for classifying structural dependencies according to their computational complexity and expressive power. It turns out that linguistic dependencies largely cluster at the lower end of the hierarchy, thanks to the limiting effects of the locality conditions that they are subject to. This computational result furnishes answers to a variety of seemingly unrelated questions, such as:

- Why is there no first-last harmony in phonology?
- Why are some prefixes and suffixes freely iterable, but no circumfixes?
- Why does no language have a monomorphemic version of the quantifier *an even number of*?
- Why is syntactic movement upward rather than downward?

This is but the tip of a much larger iceberg. The predictions span phonology, morphology, syntax, and semantics, and they even intersect with psycho- and neurolinguistics. Computational linguists cannot do all of this by themselves. Without the expertise of theoretical linguists, it is impossible to fully explore the cognitive, typological, and theoretical ramifications of this “subregular conspiracy”. If we want to know how deep the rabbit hole goes, we have to go down there together.

## **Intonational difference in syntax-marking vs. focus-marking prosodic phrasing**

Sun-Ah Jun (UCLA)

Thursday, 5:00-6:00, Theater

Prosodic phrasing refers to a grouping of words in an utterance, defined in terms of distribution of allophones and realizations of suprasegmentals. The phrasing delivers information on syntactic structure or the prominence relations among the words. Therefore, it has been known that prosodic phrasing, though not isomorphic to syntactic structure, is closely tied to syntactic structure, by marking the edges of a syntactic constituent (Selkirk 1986, 2000, 2011; Nespor & Vogel 1986/2007; Truckenbrodt 1999; Samek-Lodovici 2005). It is also well-known that contrastive or corrective focus affects prosodic phrasing in various languages, overriding the default prosodic phrasing of an utterance produced in broad focus condition. In these languages, a new prosodic boundary is often inserted right before a focused word (e.g., Japanese, Korean, Mongolian, Northern Bizkaian Basque). Researchers have assumed that a prosodic phrase would be realized the same if the type of prosodic unit is the same, regardless of whether the prosodic phrase is triggered by syntax or focus. However, it is possible that a prosodic unit has different phonetic and phonological properties depending on its function. In this talk, I will show such data from two prosodic units in Korean. First, the Intermediate Phrase (ip) in Seoul Korean is defined by pitch reset, but the right edge of ip is marked by phrase-final lengthening and a boundary tone only when it marks syntactic grouping but not when it marks focus. Second, the Accentual Phrase (AP) in Yanbian Korean, a lexical pitch accent dialect spoken in northeastern China, near North Korea, is headed by the rightmost word when it marks syntactic grouping but headed by the leftmost word when it marks focus. This data also suggests that the preverbal argument receives focus in Korean. The results will be further discussed by referring to the typological difference in prominence marking across languages.

## Argument ellipsis and structures of noun phrases

Audrey Li (USC)

Thursday, 1:15-2:15, Theater

Argument ellipsis (AE), defined as null arguments allowing sloppy readings and quantificational antecedents, is only possible in certain languages or positions. Two main factors have been proposed to determine the availability of AE—absence of articles and lack of agreement. However, among languages without articles and agreement, some allow AE only in object positions; some others, in subject and object positions (e.g, Cheng 2013, Li 2007, 2014, Tomioka 2014, Simpson et al. 2013). This work shows that such a difference argues for the need to distinguish two types of languages without articles—one projecting noun phrases to DPs containing a null D, and the other, without a D (cf. Boskovic 2008, 2012, Cheng 2013, Tomioka 2003, a.o). The latter type of languages, exemplified by Japanese, allows AE in both subject and object positions; the former, illustrated by Chinese and Bangla (Simpson et al. 2013, Simpson and Syed 2016), only in object positions. Such differences are captured by adapting Barbosa (2016)/Roberts’ (in preparation) proposal for radical *pro*-drop languages by representing their empty pronouns in two ways (a) one with an empty D, and (b) the other without a D— $(\text{DP } \emptyset_{[-\varphi]}) \dots [{}_{\text{nEAP}} x \text{ } {}_{\text{nEA}} [{}_{\text{nCatP}} \text{ ONE } {}_{\text{nCat}} ]]$ . An empty D in object positions can be incorporated to V; but due to a weak T, an empty D in the subject position is not incorporated. However, such a DP is a minimal pronoun and can turn the immediately dominating clause into a predicate (Kratzer 2009, Zhang’s 2016 derived predicate predication), which captures the generalization that a subject null argument is coindexed with the closest c-commanding antecedent and has a *de se* reading (generalized control, Huang 1982, Tomioka 2014). Differences in constituency and order requirements within noun phrases in the two types of languages support the distinction.

## The right place for locative agreement in sign languages

Josep Quer (Universitat Pompeu Fabra)

Friday, 4:30-5:30, Theater

The nature of verb agreement in sign languages is still controversial among researchers (see Costello 2016 for a very recent take on this issue), but Padden's (1983/1988) classical tripartite division of sign language verbs according to their agreeing properties (plain, person agreement and spatial agreement) has been decisive for the characterization of the phenomenon. However, the study of sign language agreement has mainly focused on verbs that agree with person arguments. With few exceptions (e.g., Janis 1992, 1995), spatial (lexical) verbs and spatial/locative agreement have received relatively little attention, since spatial agreement seems to come for granted in the signed modality. Nevertheless, no explanation has been offered for the striking fact that spatial verbs overtly agree with their locative arguments, and not with the (personal) subject when they cooccur, as in MONTH<sup>a</sup>NEXT IX1 LONDON<sup>a</sup> NEW-YORK<sup>b</sup> aFLY<sup>b</sup> 'Next month I'll fly from London to New York.' Janis (1995: 219) simply states the generalization in her system for ASL agreement: "A nominal with locative case can control agreement regardless of its G[rammatical] R[elation], S[emantic] R[ole], or animacy features."

In this talk I will offer a possible line of analysis of spatial/locative agreement in sign languages by drawing a link to the cases of locative agreement that we find in some spoken languages, like those of the Bantu family. In Chichewa, for example, locative NPs cannot only function as locative adjuncts, but they can also occur as grammatical subjects, as in (1) (Bresnan & Kanerva 1989: 2), triggering class agreement on the verb (class 17 agreement in this case).

- (1) **ku-mu-dzi ku-liu** chi-tsîme  
**17-3-village 17:SU-be** 7-well  
'In the village is a well.'

I explore the validity of the parallelism with such cases of locative agreement, as well as its limitations, in order to understand the common core between the two language modalities. I further examine the different kinds of spatial agreement that we find in sign language verbs in order to redraw the empirical map and help sharpen the analytical questions.



# Papers

## Strict Locality in Morphological Derivations

Alëna Aksënova & Aniello De Santo (Stony Brook)

Friday, 9:00-9:30, West Lounge

The traditional and widely accepted view on phonology and morphology is that they both fit in the class of regular languages (Kaplan and Kay 1994, Beesley and Karttunen 2003). But it has been recently suggested that most of the phonological patterns occurring in natural language do not need the full power of regular languages, but can in fact be captured by classes in the subregular hierarchy (Heinz and Idsardi 2013). Similarly, Chandler (2014) has claimed that morphological mappings can be analyzed as subregular functions, and Aksënova et al. (2016) have argued that morphotactics does not require more power than phonology.

However, a problem for the subregular approach arises when facing several patterns such as one of the nominalizations in Russian: the nominalization suffix *-nie* attaches only to atelic stems, but the affixes responsible for the telicity change can also be prefixes. As the result, the appearance of a perfective prefix can make the attachment of the nominalization suffix impossible. This case is problematic for the subregular approach: considering the finite amount of (im)perfective affixes in Russian, the pattern can be still captured with a regular language only by memorizing very long strings. Otherwise, it might be even not regular.

In this paper, we argue for a derivational analysis of morphological dependencies, and show how this problematic case can indeed be reduced to a subregular process, if considered over the sequence of morphological operations: only the last operation is crucial for the Russian nominalization suffix. If the last operation was the attachment of the atelic affix, the suffix *-nie* is permitted, otherwise its appearance is impossible. Such results show that if viewed under a derivational perspective, even the patterns that pose a problem for the regularity of morphology can be analyzed in a subregular fashion.

## Computational representation of unbounded stress: tiers with structural features

Hyunah Baek (Stony Brook)

Friday, 10:15-10:45, West Lounge

In computational linguistics, it is now widely agreed that phonology is regular. More recently, Heinz (2016) and related works have argued that most phonological patterns are even less complex, or *subregular*, and fit into the classes of *Strictly Local* (SL), *Strictly Piecewise* (SP), or *Tier-based Strictly Local* (TSL). By maintaining that phonology belongs to the subregular region, the Subregular Hypothesis provides explanations on the typology and learnability of phonological patterns. However, there still remain patterns that ostensibly display higher complexity. One example is culminative unbounded stress, such as the *rightmost heavy, otherwise leftmost* or the *rightmost heavy, otherwise non-final leftmost* patterns (Hayes 1995). I re-analyze these patterns and argue that once grammar has access to structural information of syllables, they are TSL after all. TSL with Structural Features (TSL-SF) posits that prosodic elements are composed of features containing their structural information and that these features rather than whole syllables trigger tier projection. In a TSL-SF grammar,  $T$  specifies feature matrices such that a symbol (consisting of structural features) is projected onto the tier iff it is compatible with one of the matrices.  $S$  specifies forbidden substrings that must not be present in the projected string. TSL-SF expands the expressivity of TSL and accommodates culminative unbounded stress patterns. The hypothesis that phonological dependencies are TSL-like thus can be maintained.

Moreover, TSL-SF grammar limits the availability of structural features to suprasegmental phonology. This analysis provides a computational account for complexity differences between segmental and suprasegmental phonology (Jardine 2014).

## Reduplication and Finite-State Technology

Hossep Dolatian & Jeffrey Heinz (University of Delaware)  
Friday, 11:15-11:45, West Lounge

Morphology and phonology have been studied within computational linguistics with finite-state technology, regular languages, and regular transductions (Kaplan and Kay, 1994; Chandlee, 2014). Although reduplication has a rich history in morpho-phonology, it has remained challenging for computational and mathematical linguistics. This is because finite-state technology as currently utilized cannot adequately describe many cases of reduplication, especially unbounded total reduplication (Roark and Sproat, 2007; Chandlee, 2014). Attempts to do so have come at the cost of imposing a finite and potentially large bound on the size of the reduplicant (Hulden, 2009).

This paper shows how a specific understudied type of finite-state technology actually can account for virtually all forms of bounded and unbounded reduplication without imposing an artificial limit on the size of reduplication. These are 2-way Deterministic Finite-State Transducers (2DFSTs) (Savitch, 1982; Engelfriet and Hoogetboom, 2001). They are distinguished from the more well-known (1-way) finite-state transducers by allowing the machine to move back and forth on the input tape but not the output tape. By having this additional power, this paper shows that 2DFSTs can capture almost all unbounded and bounded reduplicative processes in the various forms they take crosslinguistically (Moravcsik, 1978; Rubino, 2005; Inkelas and Downing, 2015a,b), including but not limited to nonlocality (Riggle, 2004), TETU effects, opacity (underapplication/overapplication) (McCarthy and Prince, 1995), and internal reduplication (Broselow and McCarthy, 1983).

## Recursively Emerging Structure: A Discovery-Device CxG

Jonathan Dunn (Illinois Institute of Technology)  
Friday, 10:45-11:15, West Lounge

Construction Grammar (CxG) views language as a network of constraint-based slot-filler constructions at different levels of representation and abstraction that emerge from observed usage. Constructions are self-similar in that the same processes and forms repeat themselves at multiple levels of representation. Thus, rather than posit a morphology and a constituent grammar and a dependency grammar that each exhibit individual behaviors, CxG posits a single grammatical unit that generalizes across these levels. Unfortunately, the CxG paradigm lacks an emergence mechanism: although constraint mechanisms have been proposed, these only apply to existing structures. This is a critical problem because any exception or unexplained phenomenon can become an item-specific construction. Without an emergence mechanism capable of predicting such item-specific representations, constructions are ultimately *ad hoc*. This paper describes a discovery-device grammar that recursively learns CxGs from large unannotated corpora, providing an emergence mechanism capable of making falsifiable predictions. The algorithm iterates across increasing levels of abstraction: purely lexical constructions, purely syntactic constructions, and full-scope constructions containing lexical, syntactic, and semantic slot constraints. Each stage inherits representations learned in previous iterations: phrase structure rules form constituents which, in later passes, inherit the syntactic and semantic properties of their head and are allowed to fill individual slots in other constructions. This recursive learning reflects the claim that grammatical structures are self-similar, sharing a single emergence mechanism.

## Towards a pied-piping account for wh-scope within compositional event semantics in minimalism

Yu Tomita (Sokendai)

Friday, 9:30-10:00, West Lounge

In this talk, I consider long-distance wh-movement and the semantics of wh-scope in a variant of the *Minimalist Grammar* (MG) formalism with compositional neo-Davidsonian semantics, proposing a covert pied-piping analysis. In Tomita's (2016) framework, Merge can assign thematic roles to arguments, whereas Move determines semantic scope. In that proposal, however, a wh-phrase that moves from an embedded clause cannot take scope over the entire sentence. Under the hypothesis that a constituent can move over the clausal boundary phonologically but not semantically, I propose that wh-phrases remain at SpecCP in the embedded clause and this embedded clause covertly moves to the matrix clause.

- (1) Who did everyone find that Brutus stabbed?
- a. SO:  $[_{CP} \text{ who}_2 \text{ did everyone find } [_{CP} \text{ who}_1 \text{ that } [_{TP} \text{ Brutus stabbed who}_0 ] ] ]$
  - b. PF: /who<sub>2</sub> did everyone find ~~who~~<sub>1</sub> that Brutus stabbed ~~who~~<sub>0</sub>/
  - c. LF: [  $[_{CP} \text{ who}_1 [_{TP} \text{ Brutus stabbed who}_0 ] ]$   $[_{CP} \text{ who}_2 \text{ did everyone find that Brutus stabbed } ] ]$

In ((1-a)), *who*<sub>2</sub> in an matrix CP is a semantically vacuous copy and thus appears in ((1-b)), but not in ((1-c)). Before Spell-Out, *who*<sub>1</sub> remains in the embedded clause. Then, this embedded clause covertly moves to the matrix one at LF. This covert pied-piping movement analysis also accounts for the proper interpretation of wh-phrases in compositional event semantics for MG. Champollion's (2015) semantic framework for MG allows wh-phrases to take scope over the entire sentence via covert pied-piping movement, since separated  $\theta$ -role components can move together with embedded clauses.

## Sorting out who's who: higher-order quantification and the interpretation of number cross-linguistically

Patrick D. Elliott (UCL), Andreea C. Nicolae & Uli Sauerland (ZAS)

Saturday, 10:15-10:45, West Lounge

Dayal (1996) and others analyze English *who* as number neutral. We argue on the basis of cross-linguistic data that Dayal's analysis cannot be maintained, and that *who* must be analyzed as ranging over generalized quantifiers (see also Spector 2007, 2008).

In the first part of the talk, we give an overview of the necessary theoretical background. To begin with, we present Dayal's analysis in terms of the *Maximal Informativity Principle* (MIP) of the *Uniqueness Presupposition* (UP) carried by singular *which*-questions. We go on to lay out our assumptions concerning the semantics of number. Following Sauerland (2003) and Sauerland et al. (2005), and others, we adopt the weak theory of plurality, i.e., we assume that singular number is presuppositional whereas plural number is semantically vacuous. We show that this is compatible with Dayal's explanation for the Uniqueness Presupposition, and furthermore that it accounts for the anti-singleton inference of plural *which*-questions via Heim's (1991) *Maximize Presupposition!* principle.

In the next part of the talk, we provide cross-linguistic evidence from Spanish and Hungarian showing that, contra predictions made by Dayal, singular *who*-questions lack a UP whereas plural *who*-questions nonetheless still carry an anti-singleton inference.

In the final section we present an explicit compositional analysis of simplex *wh*-questions which accounts for their interaction with number. The crucial innovation is to analyse simplex *wh*-expressions

as type-flexible existential quantifiers. When *who* quantifies over individuals (type  $\langle \text{et}, \text{t} \rangle$ ), we derive the UP via the interaction between singular number and the MIP. When *who* quantifies over quantifier denotations, i.e., sets of sets of individuals (type  $\langle \langle \text{et}, \text{t} \rangle, \text{t} \rangle$ ), singular number is still interpreted, but it effectively applies pointwise to each set in the quantifier denotation. The MIP thus gives rise to a weaker presupposition globally.

## Relative measurement in event-related domains: Evidence from Mandarin

Haoze Li (NYU)

Saturday, 10:45-11:15, West Lounge

This paper is concerned with relative measurement, which is expressed by percentage nouns and fractions. I show that relative measurement, just like absolute measurement, also exhibits measurement in event-related domains independent of focus, in addition to measurement in the individual domain. I provide two alternative ways to compositionally derive the event-related interpretation of relative measurement. My analysis can capture many intriguing properties of event-related relative measurement, including counting recycled individuals, requiring an event-related domain with a non-trivial part-whole structure, and sensitivity to weak island effects.

## The cumulative and distributive readings expressed by Chinese collectivizing adverbial *yiqi*

Hsiu-Chen Daphne Liao (National Chiao-Tung)

Saturday, 9:00-9:30, West Lounge

Chinese collectivizing adverbial *yiqi* ‘together’ has two main uses: to convey a team relationship or pure spatio-temporal proximity. Crucially while the latter receives either a distributive or a cumulative interpretation, the former has a cumulative interpretation only.

To explain the phenomenon, the paper first points out that agents volition is the critical factor for the shift of the two main uses, a fact making an ambiguity analysis (cf. Lasersohn (1998) for English adverbial *together*) doubtful for *yiqi*. Instead, a more reasonable account is to treat Chinese *yiqi* as an overt counterpart of the group forming operator  $\uparrow$  proposed in Landman (1989, 2000), and make it adjoin to  $v'$  in  $[-\text{volition}]$  cases and to  $\text{Cause}'$  in  $[\text{volition}]$  cases. In cases with  $v'$  adjunction, *yiqi* turns its associated plural agent into a group, which is atomic and so requires one single event. This causes spatio-temporal proximity. Next, if a QNP appears in the object position, it may receive a standard treatment for QNPs to derive a cumulative reading, or it may be taken as a property entity by the use of Chierchia’s (1994, 1985) typeshift  $\cap$  (as done in de Vries (2015)), leading to a distributive interpretation via ‘pseudo equivalent’ inference assumed in Winter and Scha (2015).

The above analysis crucially relies on a group agent to get the distributive reading. However no group agent exists in  $[\text{volition}]$  cases. In those cases, *yiqi*’s associate is in  $[\text{Spec}, \text{CauseP}]$ , working as internal causers of their own actions. *Yiqi* then comes in to form a group causer, deriving a team reading. Importantly, what is present in  $[\text{Spec}, v\text{P}]$  for agents is a covert, lower copy of the subject NP. In such a low position, the plural agent is not turned into a group; thus, no distributive interpretation is available for the team use of *yiqi*.

## Wh-items quantify over polymorphic sets

Yimei Xiang (Harvard)

Saturday, 9:30-10:00, West Lounge

This talk argues for two generalizations on the semantics of *wh*-items: (i) the restrictor of a plural or number-neutral *wh*-item consists of not only individuals but also generalized conjunctions and disjunctions; (ii) the restrictor of a singular or numeral-modified *wh*-item contains only individuals.

**Disjunctions** An elided disjunction ((1)b) can completely answer a  $\square$ -question ((1)a) by taking scope below the  $\square$ -modal. Spector (2007, 2008) thus proposes that the restrictor of *what* includes generalized disjunctions like  $s\bar{\vee}m$  ( $= \lambda P_{\langle e,t \rangle}[P(s) \vee P(m)]$ ), which takes reconstruction and derives the strongest true answer  $\square[\text{read}'(j, s) \vee \text{read}'(j, m)]$ . Further, Fox (2013) observes that this disjunction cannot completely answer the corresponding singular  $\square$ -question ((2)a): ((2)b) takes only an ignorance reading. Fox concludes that the restrictor of *which book* excludes disjunctions.

- (1) a. “What does John have to read?”  
 b. “*Syntax* or *Morphology*. (The choice is up to him.)”
- (2) a. “Which book does John have to read?”  
 b. “*Syntax* or *Morphology*. {#The choice is up to him./  $\sqrt{I}$  don’t know which exactly.}”

**Conjunctions** The predicate *formed a team* licenses only a collective reading, as ((3)) shows; thus ((4)a) suffers presupposition failure. Nevertheless, ((4)b) felicitously infers that John justifiably believes that *ab* formed a team and *cd* formed a team (cf. ((4)c)). I argue that the restrictor of *which boys* (but not that of *which two boys*) include conjunctions like  $a\oplus b\bar{\wedge}c\oplus d$  ( $= \lambda P_{\langle e,t \rangle}[P(a\oplus b)\wedge P(c\oplus d)]$ ), which supplies a conjunctive for the strongest true answer f.a.t.’( $a\oplus b$ )  $\wedge$  f.a.t.’( $c\oplus d$ ).

(*w*: The considered boys formed two teams in total: *ab* formed one, and *cd* formed one.)

- (3) # The boys formed a team. (collective)

$\sqrt{}$  The boys formed teams. (covered)

- (4) # John knows [that **the boys** formed a team]  
 $\sqrt{}$  John knows [**which boys** formed a team].  
 # John knows [**which two boys** formed a team]

**Formally**, I propose that the lexicon of the *wh*-determiner contains a  $\dagger$ -operator. This operator closes a set  $A$  under conjunction and disjunction iff  $A$  itself is closed under sum, as defined in ((6)):

- (5)  $\llbracket \text{which } A \rrbracket = \lambda B. \exists x \in [\dagger A \cap B]$

- (6)  $\dagger A = \begin{cases} \text{MIN}\{\alpha : A \subseteq \alpha \wedge \forall \beta \neq \emptyset [\beta \subseteq \alpha \rightarrow \bar{\vee}\beta \in \alpha \wedge \bar{\wedge}\beta \in \alpha]\} & \text{if } *A = A \\ A & \text{otherwise} \end{cases}$

## Japanese ‘Gapless Relative Clauses’: A Movement Approach

Toru Ishii (Meiji)

Thursday, 11:15-11:45, Theater

It has been claimed (Kuno 1973; Saito 1985) that Japanese “gapless relative clauses” exemplified by (1) are derived not by movement but by base-generation, since it looks like the relative head does not bind any position, and there is no possible derivational source:

- (1) a.  $\llbracket \text{RELATIVE CLAUSE } \text{Tai-ga} \quad \text{oisii} \quad \text{sakana} \rrbracket$ -wa eigo-dewa “side dish” dewa-naku  
 red.snapper-Nom delicious fish-Top English-in “side dish” not  
 “fish” to iu  
 “fish” as call

Lit. ‘Fish, as for which red snapper is delicious, is not called “side dish” but “fish” in English.’

- b. [[<sub>RELATIVE CLAUSE</sub> Sakura-ga ii] hana]-wa eigo-dewa “nose” dewa-naku  
 cherry.blossom-Nom good flower-Top English-in “nose” not  
 “flower” to iu  
 “flower” as call

Lit. ‘Flower, as for which cherry blossom is good, is not called “nose” but “flower” in English.’

Contrary to this widely accepted view, this paper argues that “gapless relative clauses” are derived through movement enforced by labeling as shown in (2):

- (2) a. [[[<sub>nP1</sub> Sakana] [<sub>nP2</sub> tai]] oisii]  
 fish red.snapper delicious  
 b. [[<sub>nP2</sub> [<sub>nP1</sub> **Sakana**] [<sub>nP2</sub> tai]]-ga oisii] [<sub>nP1</sub> **sakana**]

I argue that the underlying form of (1a) is (2a), where *sanaka* ‘fish’ and *tai* ‘red snapper’ are directly merged as predicate and subject on the assumption that Merge applies freely. In (2a), the two nPs *sanaka* ‘fish’ and *tai* ‘red snapper’ are merged in a single subject argument position without inducing any agreement. Since this results in a symmetric structure of {XP,YP} type, labeling requires *sanaka* ‘fish’ to move out of the subject argument position to make the structure asymmetric; *sanaka* ‘fish’ is obligatorily raised to the relative head position. This explains the apparent lack of a derivational source of “gapless relative clause”. I argue that our movement analysis is supported by island, reconstruction, and parasitic gap facts. Our analysis also gives support for the Free Merge with labeling algorithm approach.

## Syntax of Proper Names in Japanese

Kenji Oda (Syracuse)

Thursday, 10:00-10:30, Theater

This talk argues for a rather intuitive (but theoretically not well-articulated) claim that proper nouns do not form a unitary class, while providing further evidence from Japanese that supports the analysis of proper nouns that they are underlyingly predicative and their referential status is achieved compositionally/post-lexically. The Japanese noun phrase with a proper name in (1) is ambiguous, giving rise to two readings.

- (1) tanaka-no ojisan Possessive Reading: ‘Tanaka’s uncle’  
 Tanaka-GEN uncle/middle.aged.man Quotative Reading: ‘Tanaka, who is a middle-aged man’

However, the ambiguity is not found in every [PROPERN-GEN N] combination: (2) shows that only a small subclass of kinship terms with a related meaning may invoke the ambiguity, while any other nouns consistently lack the Quotative Reading (QR). (3) shows that QR is unavailable when the proper noun comes with the honorific suffix *-san*. Finally, (4) illustrates that while family names induce the ambiguity, native Japanese first names fail to bring about the QR.

- (2) tanaka-no sensei/isha ✓R: ‘Tanaka’s teacher/doctor’  
 Tanaka-gen teacher/doctor \*QR: ‘Tanaka, who is a teacher/doctor’  
 (3) tanaka-**san**-no ojisan ✓R: ‘Mr. Tanaka’s uncle’  
 Tanaka-HON-GEN *ojisan* \*QR: ‘Mr. Tanaka, who is a middle-aged man’

- (4) taroo-no ojisan                          ✓R: ‘Taroo’s uncle’  
 Taroo-GEN middle.aged.man            \*QR: ‘Taroo, who is a middle-aged man’

I take Ghomeshi and Massam’s (2009) feature-based analysis of proper nouns as a point of departure: The feature [name] is a feature on N<sup>0</sup> in English distinguishing proper nouns from common nouns, while the feature [proper] is on D<sup>0</sup> in English, and it select an NP that carries [name]. To account for (1-4), I argue that given names in Japanese are lexically associated with both [name] and [proper], while family names carry only [name], assuming that in Japanese, [proper] can be located in a functional layer between D and N. Further consequences of this proposal follow.

### ‘Why’ without reasons: ‘wh’-exclamatives in Kikaijima Ryukyuan

Lukas Rieser (Kyoto) & Rihito Shirata (JSPS / University of the Ryukyus)  
 Thursday, 11:45-12:15, Theater

This paper discusses *why*-exclamatives in Kikaijima Ryukyuan (KR), an endangered North Ryukyuan (Japonic) language, as spoken in Kamikatetsu village on Kikai Island. We show that KR *why*-exclamatives are of a type not yet described in the literature and discuss implications for extant analyses.

(1) and (2) show exclamative clefts with degree and non-degree interpretations, (3) a non-degree exclamative declarative, (4) a corresponding *why*-interrogative.

- |                                                                                                                                            |                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(1) (Ahen) hiinuhaa nuka!<br/>       so cold.NMLZ.TOP why<br/>       “How cold it is!”<br/>       (lit. “Such coldness, why!”)</p>      | <p>(3) Nuwa ahen hiinuha hoo!<br/>       why so cold SFP<br/>       “Boy it’s cold!”<br/>       (lit. “Why it’s so cold <i>hoo</i>!”)</p>   |
| <p>(2) Ahen hiinuha-hoo nuka!<br/>       so cold-COMP.TOP why<br/>       “Boy is it cold!”<br/>       (lit. “That it’s so cold, why!”)</p> | <p>(4) Nuwa ahen hiinuha ru?<br/>       why so cold QFOC<br/>       “Why is it so cold?!”<br/>       (lit. “<b>Why</b> is it so cold?”)</p> |

We analyze (1) through (3) as exclamative speech acts conveying a speaker attitude that the topicalized constituent or that following *why* is respectively high on a noteworthiness scale. Exclamatives with gradable predicates like *hiinuha* ‘coldness’ in (1) give rise to obligatory degree readings, which only arise with degree-denoting adverbs like *ahen* ‘so’ in exclamative clefts like (2). In contrast to information-seeking *why*-interrogatives like (4), exclamative clefts also have a rhetorical question reading on which a noteworthiness implicature can target the entire clause including *why*. We propose that this implicature targets the clause without *why* when the set of (true) *why*-alternatives is empty, yielding the exclamative reading of (2). Finally, exclamative declaratives like (3), similar in conveyed meaning to exclamative clefts, are taken as evidence that KR exclamatives are speech acts distinct from rhetorical questions.

Our data thus shows *why*-exclamatives of a previously unattested type — only such where the noteworthiness attitude targets the referent of *why* have been described in the literature. Our analysis furthermore sheds light on the connection between rhetorical questions and exclamatives, showing that they are connected by the noteworthiness implicature remaining when the set of *why*-alternatives is empty, but that exclamatives are speech acts distinct from (rhetorical) interrogatives.

## Deriving Mandarin Verb-doubling Resultative Compounds at the Syntax-morphology Interface: Manner Incorporation and M-merger

Jianrong Yu (The University of Arizona)  
Thursday, 10:30-11:00, Theater

Verb-doubling phenomena are theoretically interesting, particularly to the copy theory of movement (Nunes 2004), since it seems to require multiple spell-out of copies instead of spelling out only the head of the chain as standardly assumed. In this talk, I discuss the case of Mandarin Chinese resultative compounds, which exhibits optional verb-doubling (Cheng 2007: p.167).

- (1) ta qi-lei-le (nei-pi) ma  
he ride-tired-PERF that-CL horse  
'He rode that horse/horses and that horse/the horses became tired.'  
'He rode that horse/horses and he became tired.'
- (2) ta qi (nei-pi) ma qi-lei-le  
he ride that-CL horse ride-tired-PERF  
'He rode that horse/horses and he became tired.'

I assume the structure of the resultative to consist of a predicative small clause that is the complement of a causative  $v_{\text{CAUS}}$  (Harley 2005). Following Mateu (2012),  $v_{\text{CAUS}}$  in Mandarin is supplied with lexical content via a process dubbed Manner Incorporation by Harley (2005), where a root is adjoined to the specifier of and incorporated into  $v_{\text{CAUS}}$ . I propose that in the verb-doubling construction, a root that takes a complement  $\sqrt{\text{QI}} + (nei-pi) ma$  is manner-incorporated to  $v_{\text{CAUS}}$  via m-merger (Harley 2014; Matushansky 2006; Harizanov 2014). M-merger of a branching projection results in only the label of the projection, in this case the root  $\sqrt{\text{QI}}$ , being adjoined to  $v_{\text{CAUS}}$  (Harizanov 2014). In addition, before m-merger applies at spell-out, a sentence internal Topic head (as proposed by Paul 2002) probes for the RootP in the specifier of  $v_{\text{CAUS}}$  and triggers internal merge to its specifier. At spell-out, linearization no longer treats the m-merged RootP as a non-distinct copy from the topicalized RootP, leading both copies to be spelled out. I show in the talk some empirical advantages of such a treatment, namely that the verb doublet can indeed be interpreted as a presupposed topic, and that the placement of manner adverbials and negation must follow and not precede the verb doublet, suggesting that it is not within the  $v\text{P}$  domain. In doing so, I also argue against approaches that treat Mandarin verb-doubling as a case of Sideward Merge, which faces both conceptual and empirical issues.

## Where's my verb? Insights from experimental Austronesian syntax for universal production biases

Eli Asikin-Garmager (Iowa)  
Friday, 10:15-10:45, East Lounge

Speakers' production patterns are clearly shaped by the structural properties of their specific language(s), but what about instances when multiple word orders and grammatical voice choices are available? This paper reports results from a Sasak language (Eastern Indonesia) production experiment showing that speakers' grammatical voice and word order choices are shaped by both the animacy and relative length of arguments in the clause. Specifically, Sasak speakers exhibit an *animate before inanimate*, as well as a *long before short*, bias. The latter of these findings directly challenges assumptions that a universal feature of the language production system is to produce shorter elements before relatively longer ones. As such, the resulting puzzle is that data from some languages (e.g., English, German) reveal a short before long bias, while data from other languages (e.g., Sasak, Japanese)



demonstrate a long before short bias. I argue that these different biases are not language-specific, and propose the *Primacy of Semantic Richness before Event Structure Hypothesis*, which states that ‘the semantic richness of a nominal element takes precedence over its increased demand on working memory at any temporal/linear position prior to the lexical verb.’ With this hypothesis, I propose that length biases are more complex than originally posited, but can be understood as a function of where the shifted domain is relative to the lexical verb because of the demands that the verb places on form-oriented production processes. Foremost, the hypothesis accounts for a range of cross-linguistic data, and does so without stipulating language-specific parameters. Moreover, it makes several clear empirical predictions, one of which is supported with initial evidence from verb-initial languages.

### **Polar Questions, or not Alternative Questions and Complement Alternative Questions: A Comparative Study.**

Andrea Beltrama, Erlinde Meertens & Maribel Romero (Konstanz)  
 Saturday, 11:15-11:45, East Lounge

Questions with seemingly identical semantic content have different pragmatic properties. In particular, Bolinger (1978) observed that “or not” Alternative Questions (henceforth, NAQs), contrary to their polar counterparts (PQ), are infelicitous in non-canonical uses – e.g., to make invites, draw inferences, or pose rhetorical questions (in (1-3)); and are instead especially appropriate to force the addressee to respond to an information-seeking question that previously went unanswered (in (4), see also Biezma 2009).

- (1) **Invite:** Do you want a drink (# or not)?      (3) **Rhet:** Are you crazy (# or not)?  
 (2) **Inference:** You are wet. Is it raining      (4) **Info-seeking, asking 2nd time:** ✓Did  
 outside (# or not)?      you do your homework or not?

Such contrasts raises an issue: is the restricted illocutionary range of NAQs driven by the specific semantic-pragmatic properties that differentiate alternative from polar questions, or by general pragmatic principles? We address this issue by comparing the distribution of PQs and NAQs with Complement Alternative Questions (CAQ), a type of AQ that spells out the disjuncts differently.

- (5) **PQ:** Is it a boy?      (6) **NAQ:** Is it a boy or not?      (7) **CAQ:** Is it a boy or a girl?

Relying on two rating studies, we show that NAQs display a highly specialized illocutionary profile. On the other hand, CAQs feature a significantly larger range: while they are as bad as NAQs to draw inferences and as good to re-ask a question, CAQs, can also be successfully used to make invites and ask rhetorical questions, as well as to pose discourse-initial inquiries. These findings support the idea that the illocutionary restrictions on NAQs are crucially underlied by the way in which the second disjunct is spelled out. Building on Horn’s (1984) division of pragmatic labor and Biezma and Rawlin’s (2014) notion of *bundling*, we suggest that NAQs’ markedness restricts them to contexts where the combination of insistence and emphasis on *p* is maximally functional in contexts where the speaker aims to re-ask a question to wrestle an answer from the listener; CAQs’ unmarked status, by contrast, grants them the flexibility to operate in a broader range of situations.

### **Experimental Evidence for a Semantic Account of Free Choice Disjunction**

Morwenna Hoeks, Grzegorz Lisowski, Jonathan Pesetsky & Alexandre Cremers (ILLC, University of Amsterdam)  
 Friday, 9:30-10:00, East Lounge

In this paper, we present experimental evidence which sheds new light on the problem of *free choice (FC) disjunction* which has kept semanticists and pragmaticists off the streets since von Wright (1968) and Kamp (1973). Free choice disjunction is the phenomenon in which modalized disjunctions have a reading which makes both disjuncts true, as shown in (1).

- (1) Mary may have an apple or a pear.  
    ↪ Mary may have an apple.  
    ↪ Mary may have a pear.

Approaches to this puzzle come in two varieties. First, semantic approaches analyze FC effects using novel denotations for modals, disjunction, or both (Zimmermann 2000). Second, pragmatic approaches explain them as implicatures following Kratzer (2002).

A satisfactory account of FC has been elusive since it is hard to explain why the availability of FC readings seems to depend on an interaction between the *knowledgeability of the speaker* and the *scope of disjunction* relative to the modal.

In our study, we ran two acceptability judgment tasks testing predictions of recent theories from each family: Fox’s (2007) scalar implicature account and Aloni’s (2016) state-based account.

Our results showed that (i) FC readings are available for wide scope so long as the speaker is opinionated, even when either blocks reinterpretation as narrow scope, and (ii) FC is always available in narrow scope. These findings match the predictions made by Aloni (2016) and contradict judgments reported in Fox (2007) which are generally accepted in the literature. These findings thus suggest that Aloni’s semantic account of FC is in a better position than Fox’s or any pragmatic account when it comes to interactions between scope and speaker knowledge.

## English-dominant Korean speakers show reduced flexibility in constituent order

Savithry Namboodiripad, Dayoung Kim (UC San Diego) & Gyeongnam Kim (Sogang)  
Saturday, 10:45-11:15, East Lounge

Constituent order systems have been shown to reduce in flexibility due to language contact (Heine 2008). However, a causal link between contact and reduced flexibility has not yet been established experimentally, and the effect of contact on syntax is underexplored. Using an acceptability judgment experiment, we compare native Korean-speakers with English-dominant Korean-speakers (heritage speakers), finding that contact is associated with reduced flexibility (defined as lowered acceptability for non-canonical orders relative to canonical order) in constituent order.

Korean canonical order is SOV; post-verbal arguments are possible in some contexts, with no restriction on the number of post-verbal elements (Ahn 1988, Yun 2014). Grammatical non-canonical orders lead to lowered acceptability (e.g., Weskott & Fanselow 2011), so SOV should be most acceptable, followed by OSV, verb-medial orders, and, finally, verb-initial orders. Thus, we consider two hypotheses about how experience with a canonical SVO language, English, should affect acceptability of Korean constituent order. H1: If English order affects Korean, Korean SVO should be more acceptable for English-dominant participants than for Korean-dominant speakers. H2: Because heritage speakers show lowered acceptability for difficult constructions (e.g., Polinsky et al. 2009), all non-canonical orders should be less acceptable for English-dominant participants: lower flexibility.

30 Korean-dominant and 22 English-dominant participants rated sentences with animate subjects, inanimate objects, and transitive verbs, plus fillers (presented auditorily). Results show a 4-way distinction in acceptability for both groups: SOV > OSV > {SVO, OVS} > {VSO, VOS}. Non-canonical orders are significantly less acceptable for English-dominant participants than Korean-dominant participants, including SVO (contra H1). Splitting the English-dominant participants based on Korean proficiency, passive bilinguals consistently rate non-canonical orders lower than active bilinguals. Our

results align with H2: English-dominant participants differ from Korean-dominant participants in degree not kind, showing lower acceptability for non-canonical orders. This indicates that increased contact with English corresponds to decreased flexibility in Korean.

## Why do morpheme-internal segments resist alternations? A word-learning experiment

Anne Pycha (UW Milwaukee), Sharon Inkelas & Sarah Bakst (UC Berkeley)  
Friday, 9:00-9:30, East Lounge

Many phonological alternations are triggered at morpheme boundaries but blocked word-internally, in otherwise identical phonological environments. We attribute this derived environment effect to representational strength (e.g., Smolensky et al. 2014): morpheme-internal segments in stable phonetic environments have more strongly activated representations than segments whose phonetic environments vary. A grammar in which faithfulness is scaled to representational strength correctly correlates weakness with propensity to alternate (Inkelas 2015).

We test this representational theory experimentally via phoneme identification (Pitt, 2009; Samuel, 1981) and restoration (Ganong, 1980; Pitt, 2009) tasks in a word learning paradigm (Leach and Samuel 2007) exposing subjects to suffixed stems containing novel consonants [c, x, ʃ, d]. For the ‘Stable’ subject group, novel sounds occurred stem-internally (e.g., *mocoʒ-a*, *mocoʒ-u*); for the ‘Variable’ group, novel sounds occurred stem-finally (e.g., *mozoc-a*, *mozoc-u*, etc.). Learning was comparable across the groups (89.84% vs. 88.03% correct).

Our hypothesis was that ‘Stable’ subjects would have more strongly activated lexical representations for roots containing novel sounds than those in the Variable group. For the phoneme restoration task, subjects listened to bare stems that they had previously learned (e.g., *mocoʒ*, for the Stable group, or *mozoc*, for the Variable group), but with the initial consonant either mixed or replaced with white noise. Results support our prediction: the Stable group was less sensitive to the presence of noise, suggesting that they used strongly activated lexical representations to effectively restore the replaced consonant.

In the phoneme identification task, subjects listened to a previously learned stem whose initial /m/ was replaced by sounds on a synthesized [m]-[n] continuum, and identified the consonant as /m/ or /n/. Again, results support our prediction: the Stable group was more likely than the Variable group to perceive [m] even when the signal was closer to [n], suggesting that activation of representations was comparatively strong.

Conclusion: when listeners learn new words, they create more highly activated lexical entries if a novel consonant is located within (rather than at) morpheme boundaries, and thus itself more highly activated, consistent with this positions overall resistance to phonologization of alternations.

## Armenian prosody: A case for prosodic stems

Hossep Dolatian (University of Delaware)  
Thursday, 3:00-3:30, West Lounge

Armenian is a primarily-suffixing agglutinative Indo-European isolate with two main dialect families, each with its own standard dialect: Standard Western Armenian (SWA) and Standard Eastern Armenian (SEA), as well as multiple colloquial dialects (Vaux, 1998; Dum-Tragut, 2009). Armenian has complex yet understudied word-level prosodic phenomena. This paper aims to fill that gap. Two prosodic phenomena are analyzed in SWA and SEA: **primary stress assignment** and **destressed high vowel reduction**. It is demonstrated that the phonological and morphological contexts for

these processes are straightforwardly accounted for within the framework of prosodic phonology (Nespor and Vogel, 1986; Selkirk, 1996). However, it is shown that an adequate account of the data requires the inclusion of a Prosodic Stem (PStem) constituent (Downing, 1999, 2006).

It is demonstrated that the PWord, which isomorphically coincides with the Morphological Word (MWord), delimits the domain for primary stress assignment (Vogel, 2008) such that stress falls on the rightmost full vowel in the PWord. Within this domain, stress must nevertheless be assigned cyclically as each affix is added in order to account for destressed high vowel reduction. The domain for this process, however, is smaller than the PWord. It is proposed that this domain is the Pstem, a sublexical prosodic constituent (Inkelas, 1989) derived from a morphological constituent, the Derivational Stem (DStem). Other potential domains (Pwords, Recursive PWords) are shown to be inadequate. Finally, it is shown that dialect differences in the size of morpho-phonological domain for vowel reduction across between SWA and SEA can be captured using the PStem and Generalized Alignment (McCarthy and Prince, 1993). Armenian thus joins a number of other languages where PStems have been posited (Downing, 1999, 2006; Downing and Kadenge, 2015).

### The prosody of positively biased negative polar interrogatives in Japanese: Post-focal reduction or deaccenting?

David Yoshikazu Oshima (Nagoya)  
Thursday, 4:15-4:45, West Lounge

Japanese has two major varieties of negative polar interrogatives, which Ito & Oshima (2016) the P-type and the NN-type. The P-type roughly corresponds to English “outside-negation” interrogatives (e.g., *Isn't Jane coming, too?*), and convey an epistemic bias towards the positive answer. The NN-type corresponds to “inside-negation” interrogatives (e.g., *Isn't Jane coming, either?*); it typically convey an epistemic bias towards the negative answer, but also allows a neutral interpretation in certain contexts. It has been pointed out in the literature that the two varieties are prosodically differentiated. In the P-type, the prosodic features of the predicate containing the negation are subdued. The NN-type does not exhibit this property. There are two phonological processes that might account for the prosodic features of the P-type interrogative: (i) post-focal reduction, and (ii) deaccenting (accent deletion). Based on the results of a production experiment, this work demonstrates that the P-type interrogative can be derived by *either* of the two processes, which take place under overlapping but distinct sets of phonological, syntactic, and pragmatic configurations. Post-focal reduction is a general phenomenon not specifically concerned with epistemic meaning. It affects the negative predicate in the P-type because the negation involved is, unlike in the case of the NN-type, semantically void and is not part of the information-structural focus. Deaccenting, on the other hand, is a prosodic convention that directly encodes a positive epistemic bias; it can be applied only when the negative predicate occurs at the very end of the clause, and is originally accented on its penultimate mora.

### The Morphology-Prosody Interface in San Martín Peras Mixtec

Jason Ostrove (UC Santa Cruz)  
Thursday, 3:30-3:00, West Lounge

San Martín Peras Mixtec, an Oto-Manguéan language of Oaxaca, is in the process of innovating a clitic doubling pattern. This pattern copies the  $\phi$ -features of the subject with a preverbal clitic.

- |     |                    |     |                       |     |                    |     |                      |
|-----|--------------------|-----|-----------------------|-----|--------------------|-----|----------------------|
| (1) | <b>Rà</b> lo'ò rà. | (2) | <b>Rà</b> lo'ò Julio. | (3) | <b>Ñá</b> lo'ò ñá. | (4) | <b>Ñá</b> lo'ò Rosa. |
|     | he small he        |     | he small J.           |     | she small she      |     | she small R.         |
|     | 'He is small.'     |     | 'Julio is small.'     |     | 'She is small.'    |     | 'Rosa is small.'     |

In this talk, I present the syntactic origins of this pattern, which seems to have developed through clitic left dislocation (Givón 1976). I also show that it increasingly behaves like agreement, as opposed to true clitic doubling (Kramer 2014), suggesting that it is in the process of grammaticization.

In addition to syntactic conditions, this pattern displays other sensitivities. For example, an adjunct in a nominal predicate blocks a doubled clitic.

- |                                                                                                                  |                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <p>(5) <b>Rà</b> [ doktor ] Juan.<br/> he doctor J.<br/> ‘Juan is a doctor.’<br/> *<b>⊠</b> [ Doktor ] Juan.</p> | <p>(6) <b>⊠</b> [ Doktor ndíbí ] Julio.<br/> doctor handsome J.<br/> ‘Julio is a handsome doctor.’<br/> *Rà [ doktor ndíbí ] Julio</p> |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|

An adjunct in the predicate is not predicted under theories of clitic doubling to control the available of a doubled clitic. Furthermore, things become more troublesome as this pattern moves towards grammaticization as agreement, as adjuncts are transparent to Agree relations (Chomsky 2001). I propose that neither theories need to be altered to account for this pattern. Rather, I argue that the distribution of the doubled clitic in (5-6) is prosodically optimizing. Specifically, a clitic serves to create a binary prosodic phrase at the left edge of the clause (Elordieta 1997, 2007, Bennett 2012).

I adopt an Optimality Theoretic framework (Prince & Smolensky 1993) using two constraints. The first is BRANCH-INITIAL ( $\varphi$ ) (Bennett 2012), which requires that the initial phonological phrase  $\varphi$  be binary. The second is a standard constraint in prosodic phonology that penalizes prosodic clitics, such as EXHAUSTIVITY (Selkirk 1995). By ranking BRANCH-INITIAL ( $\varphi$ ) over EXHAUSTIVITY, we render clitic marked prosodically unless they make the left-most  $\varphi$  binary. This captures the distribution in (5-6) without the need for incorporating the presence of adjuncts into our theories of  $\phi$ -agreement or clitic doubling.

## On the Interaction between Phrase-final Lengthening and Prosodic Structure

Shu-hao Shih (Rutgers)

Thursday, 3:45-4:15, West Lounge

This paper proposes a novel theory about the interaction of phrase-final lengthening and prosodic structure, and presents new experimental evidence for it. Studies on many languages have shown that phrase-final lengthening distinguishes multiple prosodic levels (e.g. Wightman *et al.* 1992). I propose that phrase-final lengthening crucially obeys two requirements: cumulativity and entailment. Lengthening is cumulative such that segments in the final position of a higher prosodic domain are significantly longer than those in final position of a smaller domain. Furthermore, the occurrence of lengthening before a lower-level domain boundary entails the occurrence of lengthening at all higher levels. In this paper, I argue that evidence for a typological prediction of this theory is found in Taiwan Mandarin: final lengthening only occurs in intonational phrase-final position, and not in lower levels.

The evidence comes from an experiment that used sentences with the word order [Subject Adverb Verb Object]. All the words were disyllabic except for the object. The object was a trisyllabic word which had the following morphosyntactic structure:  $[[\sigma\sigma]\sigma]$ . Four prosodic levels were tested in this study: the foot, prosodic word, phonological phrase, and intonational phrase (IP). All the target syllables had the syllable shape CV. Corner vowels [a, i, u] were selected as target vowels; onset consonants of the target syllables were primarily drawn from [p, t, k], with [ts, tʂ, tɕ] to fill out lexical gaps. All the target syllables had a high level tone.

Results show that vowels before the boundary of IP are significantly longer than vowels before the boundary of other prosodic positions ( $p < 0.01$ ). However, vowels in other prosodic phrase-final positions do not show durational distinctions. All vowels exhibit the same pattern. The magnitude of IP-final lengthening varies among different participants, but was present for all participants. Hence,

the results are consistent with the cumulativity and entailment requirements. Finally, this paper demonstrates that final vowel lengthening applies and adds a certain amount of duration even though vowels differ from each other in terms of intrinsic duration.

## Historical Probabilities of Alternations

Gasper Begus (Harvard)  
Friday, 4:15-4:45, East Lounge

One of the most contested debates in phonology concerns identifying factors that affect typology. Two lines of thought emerge in this discussion: Analytical Bias (AB) and Channel Bias approach (CB). One of the aims of this paper is to propose a quantifiable model of typology within CB with the ultimate goal to further disambiguate AB and CB influences on typology. We introduce the concept of HISTORICAL PROBABILITIES OF ALTERNATIONS ( $P_\chi$ ) and claim that for every alternation we can calculate  $P_\chi$  based on the number of sound changes required for the alternation to arise diachronically and their corresponding probabilities.

We further propose a new method of estimating historical probabilities from typological surveys labeled “bootstrapping sound changes” (BSC). Historical probabilities are bootstrapped (Efron 1979) from a sample of successes (languages in the sample with a sound change  $S_1$ ) and failures (languages in the sample without a sound change  $S_1$ ). If an alternation  $A_x$  requires more than one sound change to arise (unmotivated minimally two, unnatural minimally three),  $P_\chi$  is bootstrapped from a product of probabilities based on number of successes and failures (divided by  $n!$  to account for ordering of sound changes).

The BSC method has several advantages: (i) the ability to compare historical probabilities of alternations and to perform inferential statistics on the comparison, (ii) the ability to predict (un)attestedness of alternations in a given sample, (iii) the ability to identify historically equiprobable processes that can be tested experimentally, and (iv) the ability to differentiate historical probabilities of unattested alternations. Finally, historical probabilities can be used as means for encoding Channel Bias in typological models.

## A computational method for evaluating theories of phonological representation

Nick Danis, Eileen Blum, Luca Iacoponi, Hazel Mitchley & Adam Jardine  
Friday, 3:15-3:45, East Lounge

We present a computationally-grounded framework in which linguistically motivated representational devices like features and tiers decrease the complexity of the grammar in a well-defined sense. Through a number of examples we show that, given the right representational assumptions, the notion of phonological naturalness can be connected to an independently motivated notion of cognitive complexity. This notion, based on  $k$ -values in the Strictly  $k$ -Local formal language classes (McNaughton and Papert, 1971), not only allows us to formalize the notion of a ‘simple’ constraint, but also gives us new insights into the nature of phonological representation. We can ask of a representational theory: Do natural, commonly attested patterns have a smaller  $k$ -value than their unnatural counterparts? We show that representations which include ordered features as explicit elements create such a distinction. In other words, in such a representation natural constraints are less computationally complex than unnatural constraints. This is a step towards unifying formal complexity and phonological substance.

## **Substantive Bias in Phonotactic Learning: Positional Extension of an Obstruent Voicing Contrast**

Eleanor Glewwe (UCLA)

Friday, 2:30-3:00, East Lounge

If a language contrasts voicing in obstruents word-finally, it contrasts voicing in obstruents word-initially, but not necessarily vice versa (Steriade 1997). The present study examines substantive bias in phonotactic learning by testing whether subjects reproduce this phonetically motivated phonotactic implicational in an artificial grammar learning paradigm. I exposed subjects to an obstruent voicing contrast in either word-initial or word-final position and tested whether they extended the contrast to the other position. There were four training languages defined on two dimensions: Trained Contrast Position (where the language exhibited an obstruent voicing contrast) and Trained Neutralization Value (whether obstruents in the other position “neutralized” to voiced (D) or voiceless (T)). Subjects also heard sonorant consonants in all positions. In the test phase, subjects heard both conforming items (consistent with the pattern heard in training) and nonconforming items (featuring the voicing and position combination not heard in training). If learners are biased toward natural phonotactic systems, subjects exposed to the obstruent voicing contrast word-initially should less readily accept nonconforming items than subjects exposed to the contrast word-finally.

The acceptance rates of nonconforming items in the word-initial contrast conditions were not significantly lower than the acceptance rates in the word-final contrast conditions. Thus the results do not support a substantive bias. However, subjects in the Initial Contrast with Word-Final Neutralization to D condition accepted T# items significantly less than subjects in the Initial Contrast with Word-Final Neutralization to T condition accepted D# items. A possible explanation lies with the presence of the sonorant-final items. In the former condition, subjects could have posited \*[voice]# to exclude T# items while in the latter condition, subjects would have had to posit the more complex \*[-son, +voice]# to exclude D# items but not sonorant-final items. The simpler constraint may have been easier to learn, resulting in the difference between the two conditions with respect to subjects’ accuracy at rejecting nonconforming items. This suggests a possible role of complexity bias in phonotactic learning.

## **Social distance correlates with similarity in linguistic behavior**

Sam Tilsen (Cornell)

Friday, 2:00-2:30, West Lounge

Studying social-linguistic patterns over an extended timeframe is challenging for a number of reasons: social networks are typically not isolated, spontaneous speech is highly variable, and obtaining sufficient temporal resolution of linguistic behavior can be resource-intensive. To address these challenges, a ten-week longitudinal study was conducted in an ad-hoc network of eight speakers. Participants played a total of 535 dyadic map task games over the course of the study and produced teammate preference rankings after each game. In addition, the task vocabulary was constrained: players were allowed to say only location names, location properties, and a small set of function words and directionals. In each round, players were randomly paired into two-person teams, with pairings biased by teammate preference rankings made in the previous round.

The main hypothesis was that temporal variation in speech behavior would correlate with variation in social distance, which was indexed by teammate preference rankings. Analyses of player-player distances in phonetic variables (vowel quality, sibilant spectra) and in syntactic patterns (Markov models of word class transition probability) were conducted using a Monte Carlo procedure. The mutual information between time series of social distance and linguistic variable distances was compared to

mutual information obtained from random permutations of these variables. The analyses showed an excess of mutual information between social distance and linguistic behavioral distance. Hence the results show that variation in social distance on the scale of ten weeks is correlated with similarity in linguistic behavior. These results demonstrate that social forces are relevant to the temporal dynamics of speech behavior on timescales of weeks and months, suggesting that change on longer timescales may also be governed to a large extent by fluctuations in social networks.

## Plurivaluationist semantics for absolute gradable predicates

Matthias Lalis (Johns Hopkins)  
Saturday, 2:45-3:15, West Lounge

In the literature on gradable predicates, “supervaluationist” accounts of degree phenomena—in which gradable adjectives are analyzed as vague predicates—have been argued to flounder on the data of absolute gradable adjectives like *empty/full* and *open/closed* (Burnett 2014, Kennedy 2007). Absolute gradable adjectives show some properties that distinguish them from relative gradable adjectives like *tall*, *clever*, *sweet*. For instance, they are generally not vague or context-sensitive (a door is *closed* if it is maximally closed, cf. *tall*), and they can occur with endpoint-oriented modifiers like *completely* (*completely closed* vs. *#completely tall*).

In this presentation, I develop a “plurivaluationist” framework for natural language semantics, a mathematical setting in which both ambiguity and gradability manifest as consequences of a language having multiple possible interpretations (Burnett 2014, Klein 1980, van Rooij 2011). A primary difficulty for theories of this type has been to explain the scale properties of absolute gradable adjectives—i.e. the existence of maximal/minimal elements. In particular, if gradable adjectives denote vague, context-sensitive predicates as the supervaluationists claim, how can one derive—apart from stipulative syntactic restrictions—the truth conditions and presuppositions of modifiers like *completely* that presuppose endpoints on a scale?

To answer this challenge, I present an intensional semantics for gradable predicates in which scale properties are stated as conditions on the set of admissible interpretations for a language—namely, that absolute gradable adjectives have maximal or minimal interpretations. I show that these conditions are coherent when gradable predicates have intensional denotations—i.e. where predicates are in  $D_{e \rightarrow (s \rightarrow t)}$ —and in general incoherent when the semantics is not intensional, which leads to correct predictions for sentences like *#The glass is full but it could be fuller* (van Rooij 2011). The framework I present explains the absolute-relative distinction and also provide a highly general degree-free theoretical toolkit for the analysis of gradability and ambiguity.

## Subjectivity and Gradability: on the semantics of the possessive property concept construction in Mandarin Chinese

Xiao Li (Queens College) & Hongyong Liu (University of Macau)  
Saturday, 3:15-3:45, West Lounge

In Mandarin Chinese, gradable predicates can be classified into two groups based on their morphosyntactic features: one consists of adjectival (e.g., *gao* ‘tall’) and verbal lexemes (e.g., *xihuan* ‘to like’), and the other consists of verbal phrases formed by the verb *you* ‘to possess, to exist’ and a NP (e.g., *you zhihui* ‘have wisdom’). Following Francez and Koontz-Garboden (2015), we refer to the latter as Property Concept (PC) possessive predicates. What is interesting about them is that not all NPs can combine with *you* to form a gradable predicate—count nouns such as *pingguo* ‘apple’ cannot; mass nouns like *shui* ‘water’ cannot either (i.e., *you pingguo* ‘have apple’ or *you pingguo* ‘have water’ only have an existential reading; they cannot be modified by degree morphology such as *hen* ‘very’). We



provide empirical evidence to show that a PC possessive predicate ‘*you NP*’ is gradable only when it expresses a subjective assessment of an object: it must be a predicate of personal taste (e.g., *fun*) or an evaluative predicate (e.g., *wise*). Based on this observation, we put forward a proposal built upon the intuition that one can truthfully say that a cup has water if there is a minimal portion of water in the cup, but one cannot say that Zhangsan has wisdom if Zhangsan only possesses a minimal portion of wisdom. The gradability of ‘*you NP*’ is essentially determined by whether the standard involved is an objective degree (i.e. zero) or a subjective degree decided by the speaker/judge ( $d_j$ ).

## **A semantic model of switch reference in Koasati**

Mary Moroney (Cornell)

Friday, 1:30-2:00, West Lounge

This paper offers a semantic model of switch reference in Koasati, a Muskogean language spoken in Louisiana and Texas. Switch reference (SR), a morphological phenomenon found in several languages in the world, is traditionally characterized as a way of indicating whether the subjects of two conjoined clauses are the same or different (Jacobsen 1993); however, later work has shown that the real picture is more complicated (see, for example, McKenzie 2015). Previous semantic accounts of SR include work by Stirling (1993), who treats switch reference as tracking the identity/disjointness between eventualities, and McKenzie (2007, et seq.), who takes SR to be indicating identity/disjointness between Austinian situations. My analysis of switch reference differs from these in that I am pursuing a reference tracking analysis. The data from Koasati suggests that SR markers manipulate the possible antecedents that can be referenced by anaphors. There is a systematicity to which antecedents are most accessible in Koasati that an event or situation based analysis of switch reference does not predict. In order to capture this pattern of available reference, I modify Dekker’s (1994) Predicate Logic with Anaphora (PLA), which encodes an order of individuals introduced in a discourse. PLA is a system for modeling English pronouns that uses standard Predicate Logic syntax with a semantics that maintains ordered lists of individuals introduced by the existential quantifier. This system can be altered to capture the basic patterns of Koasati switch reference. Aside from simply being able to account for Koasati switch reference, it is possible to compare English and Koasati systems of anaphora if both can be modeled in PLA.

## **Do You Really Mean It? Linking Lexical Semantic Profiles and the Age of Acquisition for the English Passive**

Emma Nguyen (UConn) & Lisa Pearl (UC Irvine)

Friday, 2:00-2:30, West Lounge

English children are observed to be delayed in their understanding of the passive. While some approaches suggest this is due to either a general grammatical deficiency or verb frequency in children’s input, several studies have noted that performance depends on the verb’s lexical semantics. We conducted both a meta-analysis of experimental studies assessing the age of acquisition for the passive use of English verbs and a corpus analysis of English children’s input. We find a striking correlation between the lexical semantic profile of verbs and the demonstrated age of acquisition for their passive usage by English children, with no relationship to individual verb frequency.

## **Don’t miss the BEAT!: Exceeds Comparatives in American Sign Language**

Natasha Abner (Montclair), Helen Koulidobrova (Central Connecticut), Ronnie Wilbur (Purdue) & Sandra Wood (McDaniel)

Friday, 2:00-2:30, West Lounge

Constructions expressing gradable information, especially in the domain of comparative constructions, have received significant attention in both typological studies and formal analyses. However, few studies of comparatives in sign language exist (though see Aristodemo & Geraci 2015 and Gajewski 2015 for recent work). This research incorporates sign language data into the typological and formal landscape of comparatives by providing evidence from Deaf signers that American Sign Language (ASL) uses the spatial agreement verb BEAT to create a verbal *exceed*-style comparative, thus extending the geographic distribution of *exceeds* comparatives beyond South Asian and Sub-Saharan language families. We analyze the morpho-syntactic and semantic properties of this comparative construction and provide evidence that BEAT (1) can be semantically extended to express general evaluative comparison (2), suggesting function as a grammatical comparative marker.

- (1)  $_{fs}$ TRUMP BEAT  $_{fs}$ CLINTON *Trump beat Clinton.*  
(2)  $_i$ SISTER IX $_i$  RICH ( $_i$ )BEAT $_1$  *My sister is way more rich than I am.*

Moreover, comparatives formed with BEAT are compatible with adverbial modifiers, including measure phrase differentials (3).

- (3) IX $_i$  FINISH SMOKE+++ BEAT TWICE THAN YOU *He smokes twice as much as you.*

BEAT comparatives also provide a rich domain for the exploration of clausal subordination in ASL, as they appear to allow clausal material in the standard (4). Thus, BEAT comparatives may provide additional typological evidence for Baglini's (2012) proposal (*contra* Stassen 1985) that *exceeds* comparatives allow clausal standards.

- (4) a. WIN FIVE GAME BEAT WIN FOUR GAME *Winning five games beats winning four games.*  
b. IX $_2$  WRITE, IX $_i$  WRITE, ( $_i$ )BEAT $_2$  *He's better than you at writing.*

## The Emergence of Agent-Marking Strategies in Child Homesign Systems

Laura Horton, Lilia Rissman, Susan Goldin-Meadow & Diane Brentari (University of Chicago)  
Friday, 2:30-3:00, West Lounge

Crosslinguistically, many sign languages encode argument structure alternations with a discrete agentive morpheme in classifier predicates. Benedicto and Brentari (2004) established that, in classifier predicates in American Sign Language (ASL), handshapes that iconically represent the shape of the object, *Object-CLs*, and handshapes that iconically represent how a hand would manipulate the object, *Handling-CLs*, are sensitive to agency: Handling-CLs encode transitive agentive events. We ask whether this device appears in emergent sign language systems and whether it is used productively to encode more nuanced construals of transitive agentive events. We compare two groups of child "homesigners" in Guatemala, where a homesigner is deaf children who is not learning an established sign language but are inventing their own sign systems to communicate. The first group—*family homesigners*—has a communicative model from a deaf adult relative, who also has not learned a sign language but has significant experience using their homesign system. The second group—*peer homesigners*—attend school with other deaf students and thus interact with peers who also use homesign systems. We elicited descriptions of short video clips from two family homesigners ( $M_{age} = 7;0$ ) and two peer homesigners ( $M_{age} = 12;6$ ). We find that homesigners use handshape to mark a distinction between events with and without agents. Nonetheless, homesigners who communicate with each other, but have not received a structured system as input market this distinction less consistently and do not innovate devices for more nuanced construals of agency.

## Expressing the clusivity distinction in non-specific indefinite pronouns in Turkish Sign Language (TİD)

Meltem Kelepir, Asli Özkul & Elvan Tamyurek Ozparlak (Bogazici University)  
Friday, 3:15-3:45, West Lounge

Some spoken languages and many sign languages make clusivity distinctions in personal pronouns such as exclusive vs. inclusive first person plural ('we') or dual ('two of us'). In sign languages, while inclusive pronouns are signed at the centre of the signer's chest, exclusive pronouns are signed on the lateral plane (Cormier, 2012). Exclusive pronouns in sign languages may exclude not only the addressee but also some other referents salient in the discourse. In this paper, we show that TİD makes a clusivity distinction in non-specific indefinite pronouns as well, in ways similar to the clusivity distinction in personal pronouns. These data have been elicited during a study on impersonal constructions where the referents of the agents are unknown. TİD signers have been observed to use strategies to explicitly express that the set of potential agents do not include the addressee (and other people salient in the discourse), i.e. they are not "from among us", "**the exclusive someone reading**", in contrast to explicitly expressing that the potential agents do include the addressee (and other people salient in the discourse), i.e. are "from among us", "**the inclusive someone reading**". TİD employs both lexical and modality-specific means to express clusivity distinctions: (i) there are forms which include the sign OTHER and are inherently exclusive, (ii) inclusive indefinite pronoun ONE 'someone' is signed in a central locus while the exclusive indefinite pronoun ONE<sub>ll</sub> 'someone' is signed in a high locus, (iii) the locus of agent marking on an agreement verb is high or a plain verb is signed in the upper part of the lateral plane for the "exclusive someone" reading. Our study shows that clusivity, usually associated with personal pronouns in languages, must be extended to indefinite pronouns, at least in TİD.

## Phonological Complexity is Subregular: Evidence from Sign Language

Jonathan Rawski (Stony Brook)  
Friday, 3:45-4:15, West Lounge

Do the computational properties of phonology hold independently of modality? Many phonologists claim that the characteristics of the phonological system are inextricably dependent on the physical articulators which externalize it. Others use sign language phonology as evidence for an algebraic phonology of computational rules that hold regardless of the system of articulation used, i.e. independent of modality. I use formal language theory to draw parallels between the computational complexity of three signed processes and that of their spoken equivalents, and thus point to a unified independent phonology.

I review three sign processes: metathesis, final syllable reduplication, compound reduction using the framework of Heinz (2016). He proposes that the complexity of spoken phonology is heavily restricted, falling in the sub-classes of the Chomskyan Regular class of string patterns, where grammars are defined by finite states and transitions between them. If phonology is truly independent of modality, then any phonological process will fit into this subregular characterization regardless of modality, or the algebraic view of phonology may be incorrect. I show that in sign languages, metathesis and final syllable reduplication are Strictly Local processes, just like the parallel spoken language processes (Chandlee 2014), while compound reduction uses multiple Tier-Based Strictly Local grammars. This supports the view that the Subregular classification of phonology holds regardless of modality.

## Forbidden clitic clusters in Zapotec: Implications for the Person–Case Constraint

Steven Foley, Nick Kalivoda & Maziar Toosarvandani (UC Santa Cruz)

Thursday, 3:45-4:15, East Lounge

The following line of reasoning is often advanced in the literature on the Person–Case Constraint (PCC): If an impossible combination of clitic arguments is subject to a syntactic repair, such as periphrasis, there must be something syntactic wrong with it; by contrast, if an impossible clitic cluster is subject to a morphological repair, such as deletion, there must be something morphological wrong with it (Anagnostopoulou 2003, Nevins 2007, 2011, Rezac 2011, a.o.). Combinations of third-person clitics in several Northern Zapotec varieties (Oto–Manguan: Oaxaca) challenge this well-accepted view. In these languages, we argue that clitic clusters with totally identical  $\varphi$ -features are forbidden because of a morphological constraint on haplology even though violations are repaired through syntactic means.

In these Zapotec languages, pronominal clitics exhibit a four-way gender distinction—elder human vs. non-elder human vs. animal vs. inanimate—which restricts possible clitic clusters. In addition to a *Gender–Case Constraint*, a version of the PCC that prohibits certain clusters based on a gender hierarchy, these languages generally also forbid clitic clusters with completely identical gender (and person) features. With one exception: across these varieties, the elder human clitic can take different forms depending on context. While conditioning environments vary from language to language, the following generalization holds absolutely: Two elder human clitics cannot appear in a cluster just in case they are identical in form (i.e., if the cluster is haplological). Nonetheless, violations of this *X–X Constraint* are repaired syntactically: the second argument is realized periphrastically as an independent pronoun.

For forbidden clitic clusters, then, the character of their repair does not necessarily indicate the source of their ill-formedness. This suggests, moreover, that the GCC—and, by analogy, the PCC—should be maintained as a distinct grammatical principle that treats featurally-identical clitic clusters as syntactically well-formed (Anagnostopoulou 2005, Nevins 2007, 2011, contra Walkow 2012).

## Adverbial Nominals and Case

Edward Rubin (University of Utah)

Thursday, 2:30-3:00, East Lounge

This paper applies minimalist reasoning to Case Theory, concluding that it applies more generally than normally held. Specifically, it argues against its application only to Argument Nominals (ArgNs), which would necessitate an assumed restriction beyond the minimally (and empirically) necessary one that Case Theory exists (Lasnik 2008). The main argument focuses on a contrast between two grammar types: One has Adverbial Nominals (AdvNs) with fixed morphological case, and the other has AdvNs which display structural case that can vary in standard ways. The proposal adopts standard mechanisms of minimalist theories (Chomsky 2005, 2008), including Agree and the [Case] feature, applying them to ArgNs and AdvNs equivalently, though features other than [Case] might vary across example-types, as generally permitted by modern feature-checking.

For varying-form, structural case languages (Korean, Finnish), I propose the simplest analysis, that the standard configuration for Licensing applies. Because the (structural) case of AdvNs in these languages vary in form exactly as do ArgNs, I propose that the same head ( $v$  or T) contains the licensing probe for each, thus capturing their identity of shift in form without additional assumptions beyond those needed for the standard treatment of ArgNs. In contrast, for languages with fixed case forms (e.g. German, Russian, Latin), I propose that the grammar associates the probing feature with some particular fixed head. For both, I propose that the probing feature is not  $u\phi$ , as it is for the

ArgN’s Case, because of intervention and other factors. Instead, I propose that it is the unvalued correlate of another feature that is inherent to AdvNs in the same way that  $\phi$  is to ArgNs: *Mod(ifier)* from Rubin 2003. Finally, I discuss the heads involved in the fixed-case languages, and show that this proposal reduces ”semantic” case to structural case, with licensing by a relevant head.

## Choctaw PCC repair: Basque-style PCC repair in a language with no dative

Matthew Tyler (Yale)

Thursday, 3:00-3:30, East Lounge

A striking property of Choctaw and certain Basque varieties is that the two unrelated languages make use of a similar repair strategy to obviate violations of the *Person-Case Constraint* (PCC) in transitive unaccusatives. The strategy is *Absolutive Promotion* (AP), in which an argument that typically bears absolutive Case is realized instead with ergative Case. Strangely, however, in Basque the promoted argument is the theme (Rezac 2008, Arregi & Nevins 2012), while in Choctaw it is the experiencer.

I argue that the relevant distinction is Case-assignment. On the assumption that AP always targets the highest internal argument without Case, the difference in AP between the two languages comes down to whether the Appl(icative) head assigns dative Case to the experiencer in Spec-AppIP: if Appl<sup>0</sup> does assign Case to the experiencer (as in Basque), it cannot be targeted for AP, and the next-highest Caseless argument – the theme – is targeted instead. If Appl<sup>0</sup> does *not* assign dative Case (as in Choctaw), the experiencer is now the highest Caseless argument, and it gets promoted in AP. I show that Choctaw’s apparent ‘dative’ clitics are illusory, being composed of an absolutive clitic followed by applicative morpheme.

In addition to sharing a PCC repair mechanism, the PCC restrictions in both languages can be accounted for similarly: Arregi & Nevins’s analysis, that PCC restrictions arise from a syntactic restriction against multiple clitic pronouns adjoining to a single host, extends perspicuously to Choctaw. In Choctaw, almost all absolutive clitic clusters are banned – this is because they attempt to attach to the same host. The only exceptions are when the inner clitic is 1SG – this is because, I argue, there is a dedicated head for 1SG absolutive clitics. The existence of the dedicated 1SG clitic host accounts for a variety of other anomalous behaviors of 1SG arguments in Choctaw.

## Ellipsis licensing in sluicing: A QuD account

Matthew Barros & Hadas Kotek (Yale)

Saturday, 9:30-10:00, East Lounge

This talk defends a semantic identity account of ellipsis licensing. The argument will come from examples of multiple sluicing as discussed e.g. in Romero 1998; Lasnik 2014. We concentrate in particular on antecedents that contain two quantified statements and uncover a surprising asymmetry, where surface-scope antecedents can license a multiple sluice, but inverse-scope antecedents cannot. The fact that the multiple question pre-sluice is acceptable with an inverse scope antecedent shows that this is a sluicing-specific pattern. We argue that this finding is explained by semantic accounts of ellipsis licensing, where ellipsis is licensed when the sluice corresponds to an (implicit) Question under Discussion (cf. AnderBois, 2014; Barros, 2014; Weir, 2014). We show that QuDs cannot be computed based on the truth-conditional content of the antecedents alone; instead, they must be computed only after (scalar) implicatures have been calculated and added to the common ground, along with the context of utterance. We further discuss the commitments required of a syntactic LF-identity account of ellipsis licensing in order to account for multiple sluicing with quantified antecedents, and argue that accounts along these lines would run into serious trouble, making them practically untenable.

## Verb Phrase Ellipsis is discourse reference: novel evidence from dialogue

Till Poppels & Andrew Kehler (UC San Diego)

Saturday, 9:00-9:30, East Lounge

It is widely acknowledged that the licensing and interpretation of Verb Phrase Ellipsis (VPE) is context-dependent, but the nature of that dependency remains controversial. Here, we present experimental evidence in support of a theory of VPE as discourse reference, based on short dialogues as in (1).

- (1) Spectator: Can I please **see** that card trick one more time?  
Magician: I'm sorry, I can't. [**show** it to you again]

The spectator's utterance does two things: it poses a question to the magician, which (a) provides a VP that could serve as the antecedent for subsequent ellipsis, and (b) communicates an indirect speech act by implicitly submitting a request—in this case, that a card trick be performed. The magician's response employs VPE, but the meaning of the ellipsis clause ("show") does not correspond to that of the antecedent ("see"). In a dual-task experiment, participants rated the acceptability of dialogues like (1) on a 5-point Likert scale and then paraphrased the ellipsis site in a free production task.

The results were consistent with a discourse-reference view, but incompatible with identity theories of ellipsis: participants' interpretation of the ellipsis clause exhibited a strong tendency to deviate from the meaning of the linguistic antecedent (as exemplified by the *see—show* mismatch in (1)). In terms of acceptability, we found these deviations to be associated with slightly lower acceptability compared to non-elliptical controls, but they were judged much more acceptable than lower-bound elliptical filler items. We argue that these results represent an important addition to the empirical base in the VPE literature, and discuss their ramifications for a variety of analyses of VPE currently on offer.

## Responsive Predicates are Question-Embedding: Evidence from Estonian

Tom Roberts (UC Santa Cruz)

Saturday, 10:15-10:45, East Lounge

Responsive Predicates (ResPs)—those clausal-embedding predicates which permit both declarative or interrogative complements, like *know* and *say*—pose a puzzle for compositional semantics. Declarative clauses are typically taken to denote propositions, whereas interrogatives denote questions, which is problematic if each ResP maintains a single entry in the lexicon. Prior accounts diverge on how to best rectify this inconsistency, from reducing interrogatives to propositions (Karttunen 1977, Ginsburg 1995, Spector & Egré 2015, a.o.), to reducing declaratives to questions (Uegaki 2016) or dispensing altogether with the assumption that the denotations of declaratives and interrogatives are of different types, as in Inquisitive Semantics (e.g. Theiler et al 2016).

In this talk, I bring novel data from Estonian to bear on this theoretical debate. In Estonian, a class of ResPs whose denotations concern contemplation, such as *mõtlemä* 'think, consider', convey what seem to be radically different meanings depending on the type of complement it takes. When paired with a declarative complement, *mõtlemä* canonically indicates representational belief like English *think* (1), but with an interrogative complement, it indicates ignorance toward the true answer to the embedded question, like English *wonder* (2).

- (1) Ma mõtlen, et sajab vihma.                      (2) Ma mõtlen, kas sajab vihma.  
I mõtlemä that falls rain                      I mõtlemä Q falls rain  
'I think that it's raining.'                      'I wonder whether it's raining.'

I demonstrate that a proposition-embedding denotation for *mõtlemma* is not compatible with its full range of meanings, but a question-embedding denotation, combined with standard Gricean reasoning, can naturally derive the superficially distinct interpretations of *mõtlemma* across contexts. Building upon the analysis by Uegaki (2016), I argue that a proposition-embedding semantics for ResPs is not sufficient to capture the Estonian facts, whereas a question-embedding semantics is, and that this approach is also compatible with the uniform treatment of declaratives and interrogatives of Inquisitive Semantics.

## **Locus of Marking in Nahuatl and Spanish: contact-induced morphological change**

Robert Borges & Justyna Olko (University of Warsaw)  
Saturday, 1:30-2:00, East Lounge

Locus of marking was first described in Nichols' (1986) seminal paper that described morphological head marking and dependent marking as a typological prime. She suggested that languages tend to primarily employ one strategy or the other (or none, zero marking; or both, double marking) across their grammars. This paper examines the locus of marking strategies in two languages that have been in contact for approximately half a millennium – Nahuatl and Spanish. Contact-induced language change has been regarded as the primary factor driving language change in Nahuatl varieties. Colonial Nahuatl makes primary use of head marking strategies, while Spanish tends to use of dependent-marking strategies if at all. In a forthcoming work, Olko suggests that the bulk of changes in Nahuatl have to do with a reduction or loss of head-marking strategies in modern Nahuatl varieties.

In this paper, we propose to examine locus of marking in several areas of grammar, following Nichols (1986) original description – possessive phrases, adpositional phrases, main clauses, and relative clauses. We will take a historical variationist approach, applying quantitative methodology to evenly distributed historical data from the sixteenth century to the present, which will elucidate trends in variation over time. This study is grounded in our extensive corpus of written colonial Nahuatl texts, coupled with present-day ethno-historical and linguistic data from both strongly urbanized (central Puebla, Tlaxcala, Estado de Mexico) and more peripheral rural communities where traditional modes of subsistence are preserved (Huastecan region in northern Veracruz, Sierra Negra in Tlaxcala, southern Puebla).

## **Apprehensibility emerging: The case of Kriol *bambai***

Josh Phillips (Yale)  
Saturday, 2:00-2:30, East Lounge

‘Apprehensibility’ markers are a nuanced, cross-linguistically attested grammatical category, reported to encode epistemic possibility in addition to information about speakers’ attitudes with respect to the (un)desirability of some eventuality. Taking the meaning of the Australian Kriol particle *bambai* as an empirical testing ground, this talk provides a first semantic treatment of apprehensibility, informed by a diachronic observation (due to Angelo & Schultze-Berndt 2016) that apprehensibility readings may emerge from erstwhile temporal frame adverbials that encode a relation of SUBSEQUENTIALITY between a discourse context and the eventuality described by the prejacent predicate.

Kriol *bambai* derives from dialectal English *by-and-by*, an adverbial with reflexes found across many Pacific contact varieties which is taken to encode the instantiation of its prejacent in the future of a contextually retrievable reference time. This use has been retained in Kriol, given in ((1-a)) below. In certain modalised contexts however, the apprehensibility reading is made salient; shown in ((1-a)).

- (1) a. main dedi imin go la det shop ailibala **bambai** imin kambek bla gugum  
 my father 3s=PST go LOC the shop morning **bambai** 3s=PST come.back PURP cook  
 dina bla melabat  
 lunch PURP 1p.EXCL  
 ‘My father went to the shop this morning, **then** he came back to make lunch for us’
- b. **Context:** It’s noon and I have six hours of work after this phonecall. I tell my colleague:  
 ai-rra dringgi kofi **bambai** mi gurrumuk la desk iya gin  
 1s=IRR drink coffee **bambai** 1s fall.asleep LOC desk here EMPH  
 ‘I’d better have a coffee otherwise I might pass out right here on the desk’

I propose a unified analysis of the subsequential and apprehensional readings of *bambai* by appealing to a Kratzerian analysis (2012 a.o.) of modal polysemy and the contextual retrieval of conversational backgrounds as well as drawing analogies with antecedent-as-domain restrictor analyses of conditional constructions.

This analysis provides a first formal semantic treatment of apprehensionals as a grammatical category and demonstrates the utility of a formal treatment of semantic change in the modal and expressive domains.

## Two Kinds of Quantificational Domains: Mandarin *mei* with or without *dou*

Yenan Sun (University of Chicago)  
 Saturday, 2:45-3:15, East Lounge

This paper revisits Huang’s (1995, 1996) observation that a seemingly counterpart of English D-quantifier and A-quantifier in Mandarin: *mei* and *dou*, behaves very differently from *every* and *all*. Mandarin *mei* can optionally co-occur with an adverb *dou* when there is an indefinite phrase like *yi shou ge* ‘a/one song’ in the predicate, as in (1)<sup>1</sup>; while *mei* obligatorily co-occurs with *dou* when there is no indefinite phrase in the predicate, as in (2).

- (1) mei yi ge nanhai (dou) chang-le yi shou ge.  
 MEI one CL boy DOU sing-PERF one CL song  
 ‘Every boy (\*all) sang a song.’
- (2) mei yi ge nanhai \*(dou) dao-le/chang-le zhe shou ge.  
 MEI one CL boy DOU arrive-PERF/sing-PERF this CL song  
 ‘Every boy (\*all) arrived/sang this song.’

Different from Huang’s original analysis that *mei* is a generalized universal quantifier plus a skolem function, I propose that the *mei* sentences with or without *dou* should be distinguished in terms of how their quantificational domains are built: as simplified and summarized in (3), structure A’s domain is characterized by what I call *one-time partition* which means if there are 4 boys in the context, they are divided by num<sub>1</sub> (num=numeral, assume it is 2 here) into 2 groups, each group relates to an occurrence of the event “build num<sub>2</sub>-CL castle”; structure B’s domain is characterized by *exhaustive cover building*, which means if there are 4 boys in the context, all the possible pairs are built to be quantified over and each pair as a cover relates to an occurrence of the event.

- (3) structure A: MEI num<sub>1</sub>-boy built num<sub>2</sub>-castle (one-time partition)  
 structure B: MEI num<sub>1</sub>-boy DOU built num<sub>2</sub>-castle (exhaustive cover-building)

<sup>1</sup>The notations in this paper: CL=classifier, PERF=perfective, num=numeral.



There are 3 novel predictions following from this proposal: (i) a truth conditional difference between structure A and B when  $\text{num}_1 \geq 2$ ; (ii) structure A is more sensitive to indivisible domain than B; (iii) structure B is less compatible with average semantics than A. These predictions can be confirmed by most native speakers' judgments and I will argue the messy part of the data (from a pilot study) can be explained by pragmatic factors. Finally I will provide a compositional analysis for structure A and B and further discuss the consequences and implications of encoding *one-time partition*, which captures the non-overlapping quantity of the domain, into formal semantics.

## Acknowledgments

The Chicago Linguistic Society would sincerely like to thank the following sponsors for their generous financial support of this year's meeting:

- The Office of the Reynolds Club and Student Activities
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We are especially grateful to our keynote speakers for presenting their research and to all of the session presenters for sharing their work with us. We appreciate the considerable effort involved in preparing for, traveling to, and presenting at our conference, not to mention the demanding work that their research entails. We are also very grateful to all who submitted an abstract for consideration but did not have an opportunity to present. With a three-day schedule and around 220 submissions, it was necessary to leave out from the program many outstanding pieces of research. If the Chicago Linguistic Society conference maintains high standards, it is due in large measure to the notable authors who submit their work for consideration. Special thanks must also go to the faculty and students in the Department of Linguistics who offered their valuable advice and support from the very first to the very last stages of conference preparation. In addition, we want to express our deep gratitude to all of our anonymous abstract reviewers — external and internal — who provided helpful feedback to submitting authors. Thanks, too, to all the student volunteers who helped us with the conference logistics. Finally, we would like to thank all conference attendees for joining us here at the 53<sup>rd</sup> annual meeting of the Chicago Linguistic Society, continuing the tradition of excellence.

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