

BUCLD

Boston University Conference on Language Development



33

Map of George Sherman Union (Second Floor)

Commonwealth Avenue

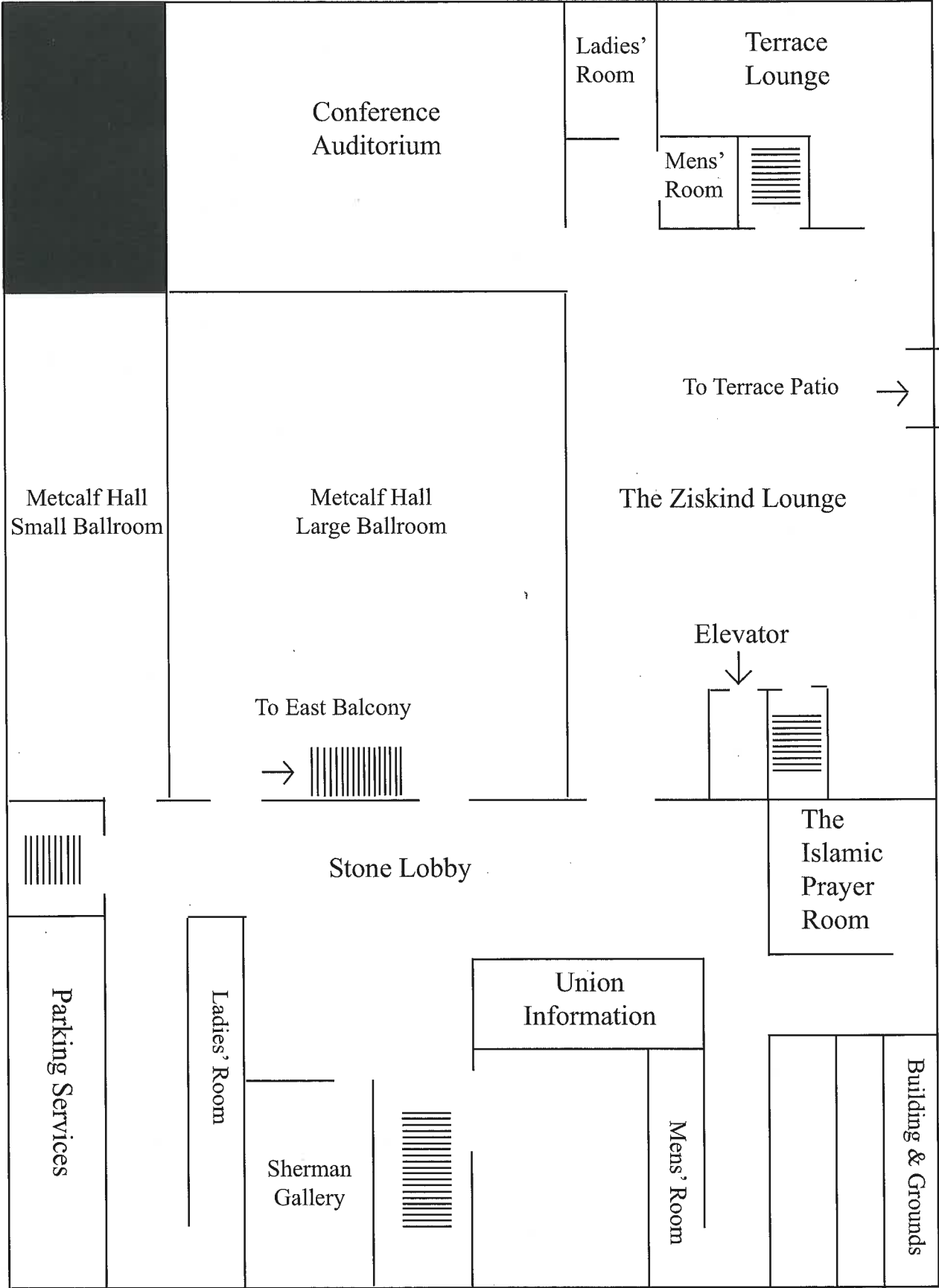


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Welcome

Our 33rd Year

We would like to welcome all of you to the Thirty-third Annual Boston University Conference on Language Development. This conference was started in 1976 and has been organized by graduate students in Boston University's Program in Applied Linguistics ever since. Over the years, various faculty members have generously given their time and energy as advisors to the conference, and several generations of graduate students have achieved continuity from one year to the next. The organizers have been honored to host participants from around the world, including linguists, psychologists, and other researchers of language acquisition and development. We thank them all for the research accomplishments they have shared with us here over the past thirty-three years.

Invited Speakers

At this year's conference, we are honored to have Barbara Landau and Tom Roeper as our featured speakers. Professor Landau will present Friday's keynote address, titled "Spatial Language and Spatial Cognition: Origins, Development, and Interaction." Saturday's program will close with Professor Roeper's plenary address, "From Input to Mind: How acquisition work captures the heart of linguistic theory and the soul of practical application." We are pleased to once again host a symposium during Saturday's lunch period in the form of a panel discussion, with participants Dick Aslin, Debra Mills, Colin Phillips, and Helen Tager-Flusberg. The title of the symposium is "Brain Mechanisms of Language Development: The promise and pitfalls of neuroimaging."

Paper and Poster Presentations

The rest of the program is devoted to a wide range of papers and posters chosen from submitted abstracts. This year we received 480 submissions, each of which was sent out to five reviewers for anonymous review. Of these, 87 papers and 66 posters were selected for presentation, for an acceptance rate of 32%. We are sorry not to have had space to include more of the many excellent submissions we received.

Proceedings

Once again this year we will be publishing the Proceedings of the Conference, which includes papers presented and those selected for alternate status. Information about ordering copies is available in your registration folders and at the Cascadilla Press table during the book exhibit. We will also have an online supplement to the proceedings for papers given as posters, which will be published on the web by BUCLD.

Enjoy

Here at Boston University, we are committed to providing an ongoing forum for the diverse field of language development. We hope you will enjoy the conference!

The 2008 Conference Committee

Jane Chandlee
Michelle Franchini
Sandy Lord
Marion Rheiner

Coordinators

Anna Belew
Eileen Gessner
Kate Iserman
Maria LaMendola
Iris Lee
Noriko Sugimori

Boston University Conference on Language Development
96 Cummington Street, Room 244
Boston, MA 02215

e-mail: langconf@bu.edu

phone: (617) 353-3085

For general information about the conference, visit our website at:

<http://www.bu.edu/linguistics/APPLIED/BUCLD/>

Acknowledgements

The Boston University Conference on Language Development is organized each year by students from the Program in Applied Linguistics. Every year, we depend upon the proceeds generated by registration and exhibition fees to cover the costs of hosting the conference, and we are very grateful to all our participants for providing this support. In addition, this year's conference is supported in part by the National Science Foundation under Grant No. BCS-0584399 and by the National Institutes of Health under Grant No. R13 HD042130-06, for which we are also very grateful.

We would like to thank the many graduate and undergraduate students who contributed their time and effort both throughout the past year and during this weekend. We are particularly thankful to the faculty and staff of the Program in Applied Linguistics and the School of Education for their support and encouragement.

We extend special thanks to our faculty advisors, Shanley Allen, Leher Singh, and Cathy O'Connor, for the care and guidance that have helped to ensure a successful conference. Their expertise and support have been invaluable.

We would also like to acknowledge the important contributions to BUCLD of the many staff at Boston University. Our heartfelt thanks to: Tara McKee and Dawn Quinlan of Conference Services for coordinating all of the equipment, facilities, and refreshments for the conference; Deanna Ammon of Disability Services for providing sign-language interpreters; Marianne Taylor, Igor Portola, and Dan Goncalves of the School of Education for their support in managing the conference finances and supplies; Niall Kavanagh of the Office of Information Technology, and Carol Moy and Lisa Wong of the Office of the Comptroller, for collaborating on the creation of our new online registration system.

Once again we were fortunate to be able to use Pasha, the abstract review software developed by Ezra Van Everbroeck at the University of California at San Diego, in our online review process. We continue to be grateful for the generosity of our colleagues in the Linguistics Department at UCSD.

Finally, we would like to thank the 176 reviewers listed below who read and rated the abstract submissions we received this year. The high quality of the abstracts makes it especially difficult to assemble a program of just 87 papers and 66 posters. We are particularly grateful for their thoughtful attention to each submission.

Nameera Akhtar	Julie Coppola	Susan Goldin-Meadow	Rene Kager
Adam Albright	Stephen Crain	Roberta Golinkoff	Dorit Kaufman
Shanley Allen	Suzanne Curtin	Helen Goodluck	Nina Kazanina
Ben Ambridge	Barbara Davis	Peter Gordon	Evan Kidd
Richard Aslin	Cecile De Cat	Janet Grijzenhout	Wolfgang Klein
Jessica Barlow	Helene Deacon	John Grinstead	Tanja Kupisch
Lilia Bartolome	Kamil Deen	Andrea Gualmini	Marie Labelle
Edith Bavin	Holger Diessel	Maria Teresa Guasti	Usha Lakshmanan
Misha Becker	Daniel Dinnsen	Ayse Gurel	Laura Lakusta
Heike Behrens	Julie Dockrell	Paul Hagstrom	Donna Lardiere
Ruth Berman	Heiner Drenhaus	Justin Halberda	Thomas Lee
Gerard Bol	Nigel Duffield	Cornelia Hamann	Claartje Levelt
Patrick Bolger	Catharine Echols	Gabriella Hermon	Beth Levin
Ellen Broselow	Richard Ely	Arild Hestvik	Juana Liceras
Doreen Bryant	Paola Escudero	Makiko Hirakawa	Elena Lieven
Nancy Budwig	Anne Fernald	Kathy Hirsh-Pasek	Barbara Lust
Ann Burger	M. Joao Freitas	Barbara Hoehle	Theo Marinis
Helen Cairns	Karen Froud	Robert Hoffmeister	Stefka Marinova-Todd
Catherine Caldwell-Harris	Anna Gavarro	Bart Hollebrandse	Lori Markson
Kyle Chambers	LouAnn Gerken	Felicia Hurewitz	Chloe Marshall
Harald Clahsen	Lisa Gershkoff-Stowe	Nina Hyams	Danielle Matthews
Jeffrey Coady	Judith Gierut	David Ingram	Rachel Mayberry
Molly	Heather Goad	Tania Ionin	Jessica Maye
Peter Coopmans	Adele Goldberg	Elizabeth Johnson	Corrine McCarthy

Acknowledgements

Tamara Medina
Jürgen M. Meisel
Lise Menn
Luisa Meroni
Toben Mintz
Maria Mody
Silvina Montrul
James Morgan
Alan Munn
Aparna Nadig
Letitia Naigles
Chandan Narayan
Elissa Newport
Cathy O'Connor
Janna Oetting
William O'Grady
Mitsuhiko Ota
Anna Papafragou
Johanne Paradis
Joe Pater

Paula Fikkert
Lisa Pearl
Ana Perez-Leroux
William Philip
Colin Phillips
Julian Pine
Bernadette Plunkett
Philippe Prevost
Rachel Pulverman
Clifton Pye
Marnie Reed
Mabel Rice
Jason Rothman
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Phaedra Royle
Esther Ruigendijk
Jenny Saffran
Lynn Santelmann
Teresa Satterfield
Cristina Schmitt

Carson Schutze
Bonnie D. Schwartz
Nuria Sebastian-Galles
Amanda Seidl
Ann Senghas
Joan Sereno
Ludovica Serratrice
Valerie Shafer
Rushen Shi
Leher Singh
Roumyana Slabakova
Melanie Soderstrom
Hyun Joo Song
Antonella Sorace
Rex Sprouse
Jeffrey Steele
Carol Stoel-Gammon
Kristen Syrett
Helen Tager-Flusberg
Anne-Michelle Tessier

Margaret Thomas
Rosalind Thornton
Liliana Tolchinsky
Mike Tomasello
John Trueswell
Ianthe Maria Tsimpli
Sharon Unsworth
Sigal Uziel-Karl
Heather van der Lely
Angeliek van Hout
Spyridoula Varlokosta
Jürgen Weissenborn
Janet Werker
Lydia White
Elizabeth Wonnacott
Fei Xu
Charles Yang
Chen Yu
Tania Zamuner
Andrea Zukowski

General Information

• Registration and Session Locations

All sessions will be held in the George Sherman Union, 775 Commonwealth Avenue. Registration will take place in the 2nd floor lobby (see diagram on the back of the front cover). You may register on Thursday starting at 12:00 PM, on Friday starting at 8:00 AM, or Saturday and Sunday starting at 8:30 AM. Please register before attending any sessions. We rely greatly upon registration fees to cover the costs of the Conference. We appreciate your willingness to wear your name badge; you may be asked to present it before entering sessions.

• Plenary Events

The **Keynote Address** will be delivered by Barbara Landau on Friday at 8:00 PM in Metcalf Large. Poster Session I (attended) with desserts will immediately follow in the Terrace Lounge.

The **Plenary Address** will be given by Tom Roeper on Saturday at 5:45 PM in Metcalf Large. Poster Session II (attended) with hors d'oeuvres will immediately follow the address in the Terrace Lounge.

A **Lunchtime Symposium** on "Brain mechanisms of language development: The promises and pitfalls of neuroimaging" with presentations from Richard Aslin, Debra Mills, Colin Philips, and Helen Tager-Flusberg will be held on Saturday at 12:15 PM in Metcalf Large.

• Poster Sessions

Poster Session I: 33 posters will be on display in the Terrace Lounge. There will be two attended Poster Sessions on Friday: one at 3:30 PM and one at 9:15 PM. Refreshments will be available at both sessions.

Poster Session II: 32 posters will be on display in the Terrace Lounge. There will be two attended Poster Sessions on Saturday: one at 3:45 PM and one at 7:00 PM. Refreshments will be available at both sessions.

• Special Sessions

The **Society for Language Development** will hold its fifth annual symposium, "Slow Mapping, Fast Mapping: Children's Word Learning 30 Years After Carey & Bartlett (1978)" on Thursday, October 30, between 1:00 PM and 5:00 PM in Metcalf Large, with a reception following immediately in Ziskind Lounge. Speakers include Susan Carey, Linda Smith, and Susan Gelman.

A special session entitled "**What's Hot and How to Apply**" will be facilitated by Peggy McCardle (NIH) and Joan Maling (NSF) on Saturday at 8:00 AM in Metcalf Large.

NSF and NIH Office Hours will be held Saturday in the Ziskind Lounge. Individual consultation will also be possible on Friday.

A **BUCLD Business Meeting** will be held on Friday, 12:45 - 1:45 PM in Metcalf Small.

• Additional Information

Parking will be provided at the Warren Towers Garage. The daily rate will be \$12 per car and if possible drivers should mention they are with the BUCLD. There is also metered (Thursday - Saturday) and free (Sunday) on-street parking available on Commonwealth Ave and Cummington St.

Temporary luggage storage space will be made available next to the registration desk. The area will be staffed during conference sessions only. Although a student volunteer will be present in the registration area, participants leave their luggage at their own risk.

General Information

A **nursing room** will be available for nursing mothers in GSU 310-311.

Internet access be available at two computer stations in the Ziskind Lounge between the hours of 8:00 AM and 6:00 PM throughout the conference.

Publishers' exhibits will be held in the Ziskind Lounge on Friday from 9:00 AM to 5:30 PM, Saturday from 10:00 AM to 5:30 PM and Sunday from 9:00 AM to 1:00 PM. For a list of exhibitors, see page 71.

Refreshments will be served in Ziskind Lounge before the morning sessions and during breaks, and in both Ziskind Lounge and the Terrace Lounge during attended poster sessions. A list of local restaurants is provided in your registration packet, and the Food Court on the ground floor of the George Sherman Union offers a wide selection.

The Registration desk provides the following services:

ASL Interpreters (Please inquire when you arrive.) ~ Message Board ~ Lost and Found ~ Campus Maps ~ MBTA Maps

The 34th Annual Boston University Conference on Language Development is tentatively scheduled to be held on November 6 - 8, 2009, at Boston University.

NIH/NSF Office Hours in Ziskind Lounge

Peggy McCardle (NIH) and Joan Maling (NSF)

Saturday 9:00 am - 12:00 pm & 2:15 - 5:30 pm

Schedule at-a-glance

Friday, October 31

8:00 am	Registration Begins
9:00 am - 10:30 am	Talks
10:30 am - 11:00 am	Morning Break with refreshments
11:00 am - 12:30 pm	Talks
12:45 pm - 1:45 pm	BUCLD Business Meeting
2:00 pm - 3:30 pm	Talks
3:30 pm - 4:15 pm	Poster Session I Attended with refreshments
4:15pm - 5:45 pm	Talks
5:45 pm - 8:00 pm	Dinner Break
8:00 - 9:15 pm	Keynote Address
9:15- 10:00 pm	Poster Session I Attended with refreshments

Saturday, November 1

8:00 am	Registration Begins
8:00 am- 9:00 am	Funding Symposium
9:00 am - 10:30 am	Talks
10:30 am - 11:00 am	Morning Break with refreshments
11:00 am - 12:00 pm	Talks
12:15 pm -2:00 pm	Lunch Symposium
2:15 pm -3:45 pm	Talks
3:45 pm - 4:30 pm	Poster Session II Attended with refreshments
4:30 pm -5:30 pm	Talks
5:45 - 7:00 pm	Plenary Address
7:00 - 7:45 pm	Poster Session II Attended with refreshments

Sunday, November 2

8:30 am	Registration Begins
9:00 am - 10:30 am	Talks
10:30 am - 11:00 am	Morning Break with refreshments
11:00 am - 1:00 pm	Talks

Time	Session A (Metcalf Small)	Session B (East Balcony)	Session C (Conference Auditorium)
9:00	J. LANY: The role of distributional and phonological cues in syntactic category learning	J. PARISH-MORRIS, K. HIRSH-PASEK, B. MALLER: Electronic console books: Independent effects on dialogic language in parents and children	L. SERRATRICE: Carving up referential space: A priming study of pronoun use in Italian
9:30	C. LEW-WILLIAMS: Fluency in using morphosyntactic cues to establish reference: How do native and non-native speakers differ?	A. DEL GIUDICE, A. LIEBERMAN, R. MAYBERRY: Do phonological awareness and coding predict reading skill in deaf readers? A Meta-Analysis	E. GRAF, D. SALOMO: I don't see what you say, but I see what you see: The role of shared preceding context and perceptual availability in children's use of referring expressions
10:00	I. ARNON, M. RAMSCAR: How order-of-acquisition shapes learning: the case of grammatical gender	M. COLLINS: ELL Vocabulary Acquisition: More Evidence from Quality Input during Storybook Reading	B. NARASIMHAN, C. DIMROTH: The role of accessibility and topicality in children's Early use of word order
10:30	BREAK (Ziskind Lounge)		
11:00	C. BANNARD, E. LIEVEN, M. TOMASELLO: Evaluating constructivist theory via Bayesian modeling of children's early grammatical development	M. LIEBERMAN, T. GRUTER, A. GUALMINI: The interpretation of disjunction under negation in L2 English and L2 Japanese	D. SWINGLEY, K. GORMAN: Lexical interpretation of phonetic variation: Results from a task combining on-line recognition and explicit judgment in 2-year-olds
11:30	E. TAKAHASHI: Statistical learning of hierarchical phrase structure in 18-month-old infants	D. PAPADOPOULOU, L. ROBERTS, I. TSIMPLI, S. LISZKA: The role of aspect in subject/object ambiguities: Evidence from an eye-tracking experiment with Greek learners of English	M. OTA, R. HARTSUIKER, S.L. HAYWOOD: Non-distinct lexical representations of L2 words: Evidence from homophony effects
12:00	C. HUDSON KAM, A. CHANG, J. MORRISON: Investigating the cause of language regularization in adults: Memory constraints or learning effects?	A. GABRIELE, J. MAEKAWA, J. ALEMÁN-BARÓN: Can we predict when "dying" will be difficult?: Progressive Achievements in L2 English	P. RICHTSMEIER, L. GERKEN, D. OHALA: Induction of phonotactics from word-types and word-tokens
12:45	BUCLD Business Meeting (Conference Auditorium)		
2:00	S. BARTELS, I. DARCY, B. HOEHLE: Schwa syllables facilitate word segmentation for 9-month-old German-learning infants	E. GAVRUSEVA: Syntactic frames and morphological cues in the acquisition of adjectives in child English and child Russian	L. MAHALINGAPPA: Acquisition of Split-Ergativity in Kurmanji Kurdish
2:30	J. HAY, J. SAFFRAN: Perceptual Constraints on Segmentation of Speech and Non-Speech	A. WEISLEDER, A. FERNALD: Real-time processing of postnominal adjectives by Latino children learning Spanish as a first language	G. KRAJEWSKI, A. THEAKSTON: How Polish children switch from one case to another when using novel nouns
3:00	J. GERVAIN, J. WERKER: Frequency and Prosody Bootstrap Word Order: A Cross-Linguistic Study with 7-month-old Infants	Y. T. HUANG: The Use of Referential Context in Children's On-line Interpretation of Scalar Adjectives	V. MOSCATI, R. TEDESCHI: The delay of Italian past participle agreement
3:30	POSTER SESSION I Attended (Terrace Lounge & Ziskind Lounge)		
4:15	R. SHI, A. MARQUIS: Mechanisms of segmentation and morphological learning in infants	C. SCHMITT, K. MILLER: Who has more? The role of the input in quantity judgements with count/mass nominals	W. Q. YOW, E. MARKMAN: Understanding speaker's communicative intent – bilingual children's heightened social awareness in communicative cues
4:45	A. KOVACS, J. MEHLER: Regularity learning in 7-month-old infants under 'noisy' conditions: Adjacent repetitions vs. non-adjacent repetitions	K. SYRETT, J. MUSOLINO, R. GELMAN: Using syntax to learn about number word meaning: Successes and challenges of a bootstrapping approach	O. E. DEMIR, S. GOLDIN-MEADOW, S. LEVINE: Narrative Structure in Children's Speech and Gesture
5:15	A. MITCHEL, D. WEISS: The role of faces in segmentation: Visual integration in a statistical learning task	A. SHUSTERMAN: Language and the Acquisition of Number Concepts	T. GOKSUN: Processing figures and grounds in dynamic and static events
5:45	DINNER BREAK		
8:00	KEYNOTE ADDRESS: (Metcalf Large) Barbara Landau: Spatial language and spatial cognition: Origins, development and interaction		
9:15	POSTER SESSION I Attended (Terrace Lounge & Ziskind Lounge)		

8:00	NSF/NIH FUNDING SYMPOSIUM: What's Hot and How to Apply (Conference Auditorium)		
Time	Session A (Metcalf Small)	Session B (East Balcony)	Session C (Conference Auditorium)
9:00	J. MAYOR: Generalisation of word-object associations: A modelling account	D. MATTHEWS, C. BANNARD: Children's production of unfamiliar word sequences is predicted by sequence predictability and semantics.	L. WAGNER: Manners and goals in pre-linguistic thought: The origins of aspectual construal
9:30	A. FERNALD, V. MARCHMAN, N. HURTADO: Input affects uptake: How early language experience influences processing efficiency and vocabulary learning	W. MA, W. WONG: Does meaning specificity facilitate verb learning and extension?	T. PRATT, D. MCCURLEY, L. WAGNER, J. GRINSTEAD: Child Spanish comprehension of verbal tense morphology
10:00	J. Y. SONG: A comprehensive analysis of the factors that predict children's vocabulary size at 19 and 25 months	N. FAMILY: Lighten up: The acquisition of light verb constructions in Persian	A. HACHOEN: Acquiring (Hebrew) compositional telicity: when is it ever complete?
10:30	BREAK (Ziskind Lounge)		
11:00	P. DE VILLIERS, J. DE VILLIERS, D. COLES-WHITE, L. CARPENTER: Acquisition of relevance implicatures in typically-developing children and children with autism	J. HAYDEN: Maternal challenges in mother-child reminiscence	D. LILLO-MARTIN, R. QUADROS: Two in one: Evidence for imperatives as the analogue to RIs from ASL and LSB
11:30	A. VERBUK: Acquisition of Relevance Implicatures and Modularity	L. STIRLING, G. BARRINGTON, S. DOUGLAS, K. DELVES: The developmental profile of editing and repair strategies in narrative structure: a cross-sectional study of primary school children	A. PEROVIC, N. MODYANOVA, K. WEXLER: Optional Infinitives in Children with Autism Spectrum Disorders and with Williams Syndrome
12:15	LUNCH SYMPOSIUM: (Metcalf Large) "Brain mechanisms of language development: The promises and pitfalls of neuroimaging" Richard Aslin, University of Rochester Debra Mills, Bangor University, Wales Colin Phillips, University of Maryland - College Park Helen Tager-Flusberg, Boston University		
2:15	S. ARCHER, S. CURTIN: Infants' perception of language specific phonotactics	P. SPINNER, J. THOMAS: Number and gender in the L2 acquisition of Swahili	A. FINN, C. HUDSON KAM, M. ETLINGER, M. D'ESPOSITO: The role of phonology in L2 learning difficulties: the cost of committing to sounds.
2:45	E. BERGELSON, W. IDSARDI: Structural Biases in Phonology: Infant and Adult Evidence from Artificial Grammar Learning	L. WHITE, A. BELIKOVA, P. HAGSTROM, T. KUPISCH, O. OZCELIK: Restrictions on definiteness in L2 English	J. OH, T. AU, S. A. JUN: The Nature of Childhood Language Memory: Korean Adoptees Learning Korean as Adults
3:15	C. NARAYAN, D. SWINGLEY, K. GORMAN: The acoustics of [voice] in infant-directed speech and implications for phonological learning	F. WILSON, A. SORACE, F. KELLER: Antecedent preferences for anaphoric demonstratives in L2 German	M. CHRISTIANSEN, K. KELSEY, J. TOMBLIN: Associations of ASPM genetic markers with language and non-verbal intelligence
3:45	POSTER SESSION II Attended (Terrace Lounge)		
4:30	O. GURCANLI, B. LANDAU: Putting things together: How children and adults distribute spatial information across the clause.	T. GRIECO-CALUB, J. SAFFRAN, R. LITOVSKY: Spoken word recognition abilities in toddlers who use cochlear implants	T. HUNTER, A. CONROY: Children's restrictions on the meanings of novel determiners: an investigation of conservativity
5:00	L. ARBANELL, P. LI: Spatial Frames of Reference and Perspective Taking in Tzeltal Maya	L.-Y. GUO, L. SPENCER, J. TOMBLIN, E. WALKER, B. GANTZ: Acquisition of tense marking in children with cochlear implants: A surface hypothesis account	S. KIM: Eye movements during the processing of ambiguous sentences with the focus particle 'only' in L1 acquisition
5:45	PLENARY ADDRESS: (Metcalf Large) From input to mind: How language acquisition research captures the heart of linguistic theory and the soul of practical application Tom Roeper, University of Massachusetts, Amherst		
7:00	POSTER SESSION II Attended (Terrace Lounge & Ziskind Lounge)		

Time	Session A (Metcalf Small)	Session B (East Balcony)	Session C (Conference Auditorium)
9:00	A. DE MARCHENA, A. WOREK, K. ONO, I.-M. EIGSTI, J. SNEDEKER: Mutual exclusivity in autism spectrum disorders: Testing the pragmatic hypothesis	A. TERZI, V. TSAKALI: On vs above: lexical semantics and syntactic factors affecting spatial acquisition	R. REICHLER: ERP correlates of syntactic focus structure processing: Evidence from L1 and L2 French
9:30	M. FRANK, N. GOODMAN, J. TENENBAUM: Modeling early word learning through inference about speakers' referential intentions	M. JOHANSON, S. SELIMIS, A. PAPAFRAGOU: Cross-linguistic biases in the semantics and acquisition of spatial language	D. TANNER, L. OSTERHOUT, J. HERSCHENSOHN: Snapshots of grammaticalization: Differential electrophysiological responses to grammatical anomalies with increasing L2 exposure
10:00	T. MEDINA, J. TRUESWELL, L. GLEITMAN: Cross-Situational Learning in Realistic Learning Environments: Evidence for Epiphanies	A. FIDLER, A. BABARCY: Expanding Locative Case Marking beyond Spatial Contexts in Child Hungarian	C. LOZANO & A. MENDIKOETXEA: L2 syntax meets information structure: Word order at the interfaces
10:30	BREAK (Ziskind Lounge)		
11:00	R. PULVERMAN, K. ROHRBECK, P. CHEN, A. ULRICH: Specificity of Meaning Predicts Verb Acquisition in English and Mandarin Chinese	K. MESSENGER, H. BRANIGAN, A. SORACE, J. MCLEAN: Semantic factors in young children's comprehension and production of passives	M. VAN OOSTENDORP, C. LEVELT: Frequency and features in first language phonology
11:30	A. PEREZ-LEROUX, M. PIRVULESCU, Y. ROBERGE: On the semantic properties of implicit objects in young children's elicited production	J. CRAWFORD: Sesotho passives: The long and short of it	A. FARRIS-TRIMBLE: Weighted constraints and faithfulness cumulativity in phonological acquisition
12:00	M. KLINE, K. DEMUTH: Syntactic generalization with novel intransitive verbs: Who is pilking?	J. VAN RIJ-TANGE, P. HENDRIKS, J. SPENADER, H. VAN RIJN: From group results to individual patterns in pronoun comprehension	J.P. CHEVROT, C. DUGUA, E. SPINELLI: Acquisition of liaison and sensitivity to plural/singular orientation of nouns: a test case for a central hypothesis of the usage-based theory of language development
12:30	S. WAXMAN, L. PLOTKIN: Linguistic information supports 3-year-olds' identification of verbs (and nouns): New evidence from a modified Human Simulation Paradigm	A. GAGLIARDI, J. LIDZ: Filler-gap dependencies in 15- and 20-month olds	M. VIHMAN, T. KEREN-PORTNOY, R. DE-PAOLIS, G. KHATTAB, S. SCHIEMENZ: Phonological development in Late Talkers

ALTERNATES

N. ARIAS-TREJO	The role of categorical proximity for referent identification in a preferential looking task
J. GRINSTEAD, V. WARREN, C. RICCI & S. SANDERSON	Finiteness, subject-aux inversion and the head movement constraint in child English
T. KRAS	Native-like attainment of the lexicon-syntax interface in the L2: Evidence from converging methodologies
A. DE PRADA PEREZ	The acquisition of subject expression in early Catalan-Spanish bilinguals: A case of convergence
R. SANTOS	Segmental and Prosodic Aspects in the Acquisition of elision in Brazilian Portuguese
M. SRINIVASAN & J. SNEDEKER	On the nature of early lexical representations of polysemous words
J. ROTHMAN, P. GUIJARRO-FUENTES, M. IVERSON & T. JUDY	Learnability in L2 syntax-semantics: Evidence from German and Italian learners of L2 Spanish

Friday, October 31

Posters will be attended from 3:30 PM - 4:15 PM and from 9:15 PM - 10:00 PM (Terrace Lounge & Ziskind Lounge)

Authors	Title
S. ARUNACHALAM & S. WAXMAN	Syntax informs two-year-olds' expectations about verb meaning
I. BARRIERE, S. FRENKEL, S. HALBERSTAM, S. SMEDESCHAN, E. BERGELSON & J. CHEN	Quantitative effects on Yiddish/English bilingual development
Y. CHOI, E. GRINNELL & M. WETSTONE	Five-year-olds reliance on verb in sentence parsing
M. CHOUINARD & L. DURAN	The role of parental mental-state talk in the development of social understanding
D. DAVIDSON & V. RASCHKE	Metalinguistic awareness in monolingual and bilingual children and its relationship to receptive vocabulary scores and performance on a reading readiness test
C. FOLEY	Pied-piping in embedded contexts in the acquisition of English: A qualitative analysis of comprehension
L. GOLDBERG	Oral reading fluency's relationship with reading comprehension
J.A. JOHNSON, A. AKTAY, D. MCCLODY & G. JAROSZ	Exploring the predictive power of distributional cues to word boundaries in three languages
J. LEE	Early lexical composition of Cantonese-English bilingual children
O-S. LEE	Acquisition on Korean disjunction under negation
A. LIBENSON, P. CHEUNG, M. TAKASAKI, N. SNAPE & D. BARNER	Quantifiers as a window into set representations: Evidence from children learning Japanese and English
J. LIDZ & R. BAIER	Learning thematic structure: Developmental changes in sensitivity to lexical and syntactic cues
A. LIEBERMAN	Attention-getting strategies of deaf children using ASL in a preschool classroom
L. NAIGLES, A. GOODWIN, G. JAFFERY & D. FEIN	Grammatical strengths and difficulties in the language comprehension of young children with autism
S. OZCALISKAN & S. GOLDIN-MEADOW	Sex differences in language first appear in gesture
J. PATER, E. MORETON & M. BECKER	The language of possession and space: Differential encoding of recipients and locations in transfer events

Friday, October 31
Posters will be attended from 3:30 PM - 4:15 PM and from 9:15 PM - 10:00 PM (Terrace Lounge)

Authors	Title
K. PEETS, C. LAHMANN & E. BIALYSTOK	Bilingual children's narratives in English: Links with home literacy practices
M. RODRIGUEZ-MONDONEDO	Grammatical conservatism: Evidence from the acquisition of differential object marking
S. ROSS	Acquisition of contrastive stress comprehension
C. SHEA & S. CURTIN	Contextual factors and L2 allophone acquisition
N. STEPHENS	Candy bars hurt people: Inanimate subjects in child and child-directed transitives
H. STICKNEY	Acquisition of DP in the partitive structure
A. STREKAS, R. NEWMAN & N. BERNSTEIN RATNER	The role of selected lexical factors on confrontation naming accuracy and speed in children
D. STRINGER, B. BURGHARDT, Y-T. WANG & H-K. SEO	Learning homonymous and synonymous words through cross-situational statistics
M. SUNDARA, K. DEMUTH & P.K. KUHLM	Positional effects on 2-year-olds' comprehension and production of 3rd person singular -s
J. VIAU & B. LANDAU	The language of possession and space: Differential encoding of recipients and locations in transfer events
K. WHITE & R.N ASLIN	Lexical knowledge drives toddlers' adaptation to novel accents
S-J. YANG, P. LI & S. CAREY	Role of language in the development of singular-plural representation: Evidence from Mandarin-speaking children
K. YOSHIDA, F. PONS & F. WERKER	A role for attention in phonetic change?
S. YUAN	2-year-olds learn and retain combinatorial facts about a new verb over a delay
D. YUROVSKY & C. YU	Learning homonymous and synonymous words through cross-situational statistics

<p>Saturday, November 1</p> <p>Posters will be attended from 3:45 PM - 4:30 PM and from 7:00 PM - 7:45 PM (Terrace Lounge & Ziskind Lounge)</p>	
Authors	Title
F. ADRIAANS	Learning phonotactic constraints from continuous speech: A computational study
B. AMBRIDGE & R. HADZIK	Similarity to existing regular past-tense forms affects children's judgments of novel past-tense forms
N. Arias-Trejo	The role of categorical proximity for referent identification in a preferential looking task
H. BARBOSA, R. QUADROS & M. CAMPOS	The relationship between sign language and number concepts in deaf Brazilian preschoolers
F. CHANG	Weight-based processing biases in a connectionist model of English and Japanese syntax acquisition
N. DUFFIELD, A. MATSUO & L. ROBERTS	Seeing what's missing: What (eye-tracking) data from native speakers and second language learners can tell us about the theoretical distinction between VP-ellipsis and VP-anaphora
B. Estigarribia	Measuring the emergence of yes/no questions: Structural break estimation techniques
E. FLORIT, M-C. LEVORATO & M. ROCH	Individual differences in preschoolers' text comprehension: Contributions of verbal abilities, short-term and working memory
J. GRINSTEAD, V. WARREN, C. RICCI & S. SANDERSON	Finiteness, subject-aux inversion and the head movement constraint in child English
M. GULIAN	An acoustic analysis of child language productions with reduced clusters
R. HERMAN, C MARSHALL., K. MASON, K. ROWLEY, G. MORGAN & B. WOLL	Specific Language Impairment (SLI) in sign language: data from deaf signing children
B. HEROLD & B. HOHLE	Language performance in 6- and 9-month-old infants with very low birth weight
B. HUANG & S-A. JUN	Age constraints on the acquisition of second language prosody
K-S. JIN & H-J. SONG	The acquisition of case markers in Korean 3-year-olds
R. KAGER, N. BOLL-AVETISYAN & A. CHEN	Gradient phonotactic constraints for speech segmentation in a second language
T. KRAS	Native-like attainment of the lexicon-syntax interface in the L2: Evidence from converging methodologies

Saturday, November 3
Posters will be attended from 3:45 PM - 4:30 PM and from 7:00 PM - 7:45 PM (Terrace Lounge)

Authors	Title
E. KUSHNERENKO, A. ENDRESS, A. NEVINS, O. TUOMAINEN, M. HAUSER & H. VAN DER LELY	Abstract rule learning in typically developing and G-SLI adolescents: An ERP study
E. MARCHETTO & L. BONATTI	Statistical computation and rule-learning in 12- and 18-Month-olds: Evidence for two distinct mechanisms
A. MARQUIS & R. SHI	Recognition of bound morphemes in preverbal infants
C. MONJAUZE & L. TULLER	Language outcome in benign Rolandic Epilepsy of childhood with centro-temporal spikes: Syntactic complexity deficit
K. MURASUGI & C. FUJI	Root Infinitives in Japanese and the late acquisition of head-movement
R. NOVOGRODSKY & N. FRIEDMANN	The syntactic deficit in SLI: When an argument crosses a similar one
A. PILLUNAT & D. ADONE	Word recognition in German primary school children with English as a second language: Evidence for positive transfer?
A. DE PRADA PEREZ	The acquisition of subject expression in early Catalan-Spanish bilinguals: A case of convergence
J. ROTHMAN, P. GUJARRO-FUENTES, M. IVERSON & T. JUDY	Learnability in L2 syntax-semantics: Evidence from German and Italian learners of L2 Spanish
R. SANTOS	Segmental and prosodic aspects in the acquisition of elision in Brazilian Portuguese
B. SKARABELA & L. SERRATRICE	The doctor's mother or the mother of the doctor?: Syntactic priming of possessive noun phrases in English pre-schoolers
K. SKORUPPA & S. PEPERKAMP	Phonetic distance constrains the acquisition of phonological alternations
M. SRINIVASAN & J. SNEDEKER	On the nature of early lexical representations of polysemous words
R. STEINKRAUSS	The interaction of discourse function and input frequency in L1 acquisition: The case of was...für 'what kind of...' Questions in German
D. VALOIS, P. ROYLE & N. BOURGUIGNON,	Discriminating linguistic analyses with child data: the case of N-drop in French
D. YÜRET, A.E. URAL, N. KETREZ, D. KOÇBAŞ & A. C. KÜNTAY	Morphological cues vs. number of nominals in learning verb types from child directed Speech

Session A--Metcalf Small

The Role of distributional and phonological cues
in syntactic category learning*Jill Lany**University of Wisconsin-Madison*

Infants begin to track distributional and phonological cues that mark syntactic categories from birth, but do they integrate this sensitivity with semantic information, another critical dimension of syntactic categories? We first gave 22-month-olds auditory experience with an artificial language containing two word-categories distinguished by phonological and distributional cues (the Experimental Group), or with a language in which these properties did not cue category membership (the Control group). Both groups were then trained on pairings between the languages' word-categories and pictures from two categories (animals and vehicles), and tested on familiar and novel picture-word pairings. Only Experimental toddlers learned the specific associations between words and pictures and generalized the pattern to novel pairings. These findings suggest that toddlers readily integrate category knowledge gained from experience with words' phonological and distributional properties with words' semantic properties, and that sensitivity to distributional and phonological cues plays an important role in syntactic-category learning.

Session B--East Balcony

Electronic console books:
Independent effects on dialogic language
in parents and children*Julia Parish-Morris, Kathy Hirsh-Pasek and Becca Maller*
Temple University

Preschoolers whose parents read traditional books to them in an interactive, dialogic way have richer language and improved pre-literacy skills (Zevenbergen & Whitehurst, 2003). Does parent-child language change when reading hand-held electronic console (EC) books? Eighty 3- and 5-year-old children read either an EC or a traditional storybook with their parents. Transcripts were coded for elements of dialogic reading and for behavior-related talk. Results revealed that parents and children spoke less dialogically and more about issues related to behavioral control when reading EC books together than when reading traditional books. Further analyses revealed that the richness of children's language was diminished even after controlling for the effects of parental speech during EC book reading. The current studies suggest that, in comparison to traditional books, EC books do not encourage the dialogic interactions that are beneficial to emergent literacy.

Notes

Session C--Conference Auditorium

Carving up referential space:
A priming study of pronoun use in Italian*Ludovica Serratrice, University of Manchester*

Italian-speaking children as old as 9 tend to use a significantly higher proportion of pragmatically inappropriate ambiguous null pronouns and of redundant overt subject pronouns than adults. The aim of the two current experiments was to investigate whether these infelicitous occurrences could be explained by priming. Two groups of Italian-speaking 6-year-olds ($N=80$) and 8-year-olds ($N=70$) participated in two studies where they described a target picture after hearing a prime description. Children in the 'null condition' heard sentences containing null subject pronouns, and those in the 'overt condition' heard sentences with overt subject pronouns. In Study 1, but not in Study 2, children also repeated the experimenter's prime before their target description. The results of both studies show that children are significantly affected by the overtness of the pronoun in the primes. These experiments provide a new processing account of children's use of pragmatically infelicitous null and overt pronouns.

Session A--Metcalf Small

Fluency in using morphosyntactic cues to establish reference:
How do native and non-native speakers differ?

Casey Lew-Williams, Stanford University

Native Spanish-speakers, but not L2 Spanish-learners, take advantage of gender-marked articles (la, el) to more rapidly identify familiar nouns (Lew-Williams & Fernald, 2007). Can cumulative frequency of exposure to familiar article-noun sequences explain L1-L2 differences in processing efficiency? L1- and L2-adults learned names for novel objects in sentences with definite (Exp. 1) or indefinite articles (Exp. 2). Participants then heard test sentences with definite articles that referred to one of two objects with names of the same or different grammatical gender. Eye movements showed that L2-adults exploited informative articles on different-gender trials when the same articles were heard during teaching and testing, but not when test sentences required generalization between article forms. However, L2-adults took advantage of gender- and number-marked articles when candidate referents were male vs. female faces (Exp. 3) or one vs. multiple objects (Exp. 4). Grammatical, distributional, and experience-related explanations for these findings will be discussed.

Session B--East Balcony

Do phonological awareness and coding
predict reading skill in deaf readers? A meta-analysis

*Alex del Giudice, Amy Lieberman and Rachel Mayberry
University of California - San Diego*

Phonological awareness, or coding, skills are hypothesized to play a key role in reading development for readers who hear, although the direction and size of these effects is controversial. We investigated the relation between phonological awareness/coding skills and reading development in readers who are deaf with a meta-analysis. From an initial set of 230 relevant publications addressing this question, we found 24 studies that measured the relationship directly and experimentally. Our analyses revealed that the average relationship of phonological awareness/coding to reading level in readers who are deaf is low to medium in size. Variables such as experimental task, reading measure, and reader characteristics explain the variation across study results. The small and unreliable relation between phonological awareness/coding and reading in the deaf population suggest that it plays a minor role in their reading achievement.

Session C--Conference Auditorium

I don't see what you say, but I see what you see: The role of
shared preceding context and perceptual availability in chil-
dren's use of referring expressions

*Eileen Graf, University of Manchester
Dorothe Salomo, Max Planck Institute for
Evolutionary Anthropology*

This study attempted to disentangle the effects of shared preceding context and perceptual availability with regard to argument realization. We presented 3;0- and 4;0-year-old German-speaking children with three successive scenes in which an agent performed different actions on a patient (e.g., monkey kissing lion, monkey pulling lion, monkey stroking lion). When the third scene appeared, the experimenter asked a predicate-focus question (e.g., What's the monkey doing now?). Of interest was the child's realization of the patient argument (full noun/pronoun/null reference), which was always given information for the child, but new or given for the experimenter. Our results revealed an effect of perceptual availability: The children chose significantly more full nouns when the experimenter could not see the scenes than when she could. There was no effect of shared preceding context. This suggests that, when answering questions, children's referring expressions are influenced by the target scene's perceptual availability to their addressee.

Notes

Session A--Metcalf Small

How order-of-acquisition shapes learning:
the case of grammatical gender*Inbal Arnon and Michael Ramscar, Stanford University*

Learning is shaped by order-of-acquisition; what you know shapes what you learn. We explore how the size of the initial units (words or multi-word sequences) shapes learning. We show that learning of grammatical gender is facilitated when learners are first exposed to larger sequences of language. We compared learning of noun classes in an artificial language in two conditions. In the sentence-first condition participants first heard a block of full sentences (carrier-phase determiner noun) and then a block of noun labels. In the label-first condition, participants heard a block of noun labels and only then a block of full sentences. Frequency-of-exposure was identical in both conditions. Participants showed better learning of the determiner-noun pairings in the sentence-first condition. We propose a learning theory account that highlights the importance of early exposure to larger sequences. We relate the findings to differences in learning grammatical gender between L1 and L2 learners.

Session B--East Balcony

ELL vocabulary acquisition: More evidence from quality
input during storybook reading*Molly Collins, Erikson Institute*

Participants were 133 preschool-aged typically developing native speakers of Spanish who are English language learners. Subjects were pretested in L1 receptive vocabulary and L2 receptive vocabulary, were randomly assigned to experimental (G1) or control (G2) groups, and were read four pairs of storybooks with sophisticated vocabulary words inserted. G1 heard stories read with rich explanations (pointing, gesture, definition, synonym, and decontextualized statement) of target words while G2 had no explanation. Results from target vocabulary tests show a significant effect of treatment on word learning. Baseline L2, but not L1, had a significant effect on new word learning. In fortifying findings from a related study with Portuguese preschoolers, this study strengthens evidence for generalizing L2 vocabulary acquisition strategies to a range of ELL populations, using storybook reading as a context for L2 vocabulary development, and providing exposure to sophisticated input in preschool. Implications of home reading will also be discussed.

Notes

Session C--Conference Auditorium

The role of accessibility and topicality in children's early use
of word order*Bhuvana Narasimhan, University of Colorado at Boulder
Christie Dimroth, Max Planck Institute for Psycholinguistics*

A fundamental principle guiding constituent ordering relates to the accessibility of referents in discourse. Typically, adults order previously mentioned referents ("old" or accessible information) first, before they introduce referents that have not yet been mentioned in the discourse ("new" or inaccessible information). But interestingly, 3-5-year-old children acquiring German prefer to order new referents before old referents (Narasimhan & Dimroth, 2008) suggesting that the putatively universal "old-before-new" order is not rooted in early child language. The present study investigates whether 3-5-year-olds acquiring German switch to the adult-like "old-before-new" pattern if the "old" object is not simply accessible (seen and labeled previously), but is additionally talked about, i.e. made a discourse topic. Interestingly, children continued to exhibit a non-adult-like newness preference in their responses. Children's preference for the non-adult-like "new-before-old" pattern is robust, even when encouraged to construe the old referent as, not only "old", but also topical.

Session A--Metcalf Small

Evaluating constructivist theory via Bayesian modeling of children's early grammatical development

Colin Bannard,

Max Planck Institute for Evolutionary Anthropology

Elena Lieven, University of Manchester

Michael Tomasello, Max Planck Institute for Evolutionary Anthropology

We report on two experiments in which we use a computational model to evaluate the usage-based account of early production (e.g. Tomasello, 2003). We employed an unsupervised Bayesian procedure to extract grammars from transcribed recordings of 2 children collected over six-week periods following both their second and third birthdays. These grammars were induced directly from the word sequences and, while fully hierarchical, consisted of lexically-specific schemas and patterns. In a first experiment we parsed all of each child's unique multiword utterances from subsequent 2 hour recordings at each age. At 2 years these were accounted for effectively (as much as 87% coverage) and perspicuously. In a second experiment we included human-annotated parts-of-speech in the induction procedure and found that only the noun category affected coverage at age 2. At age 3 we found that verb as well as noun categories improved performance, suggesting a gradual development of abstract knowledge.

Session B--East Balcony

The interpretation of disjunction under negation in L2 English and L2 Japanese

Moti Lieberman, McGill University

Theres Gruter, University of Montreal

Andrea Gualmini, Utrecht University

Szabolcsi (2002) observes variation in how negated disjunctions operate: English-type languages interpret *or* under negation, licensing conjunctive entailments, whereas Japanese-type languages cannot. Goro & Akiba (2004) argue these are parametric options in a subset(English)/superset(Japanese) relation, with English as the default L1 setting. For L2 acquisition, assuming L2ers transfer L1 interpretive properties, this predicts English learners of Japanese should successfully acquire the target-like interpretation, but that Japanese learners of English will not acquire the English-like interpretation. To test this, we used a truth-value judgment task with 14 L1-English/L2-Japanese speakers and 32 L1-Japanese/L2-English speakers. Our results show English-speaking learners acquire the Japanese setting, whereas Japanese-speaking learners are less successful with English. However, individual results reveal 5 L1-Japanese learners acquired the English interpretation. We argue these surprising individual results indicate use of pragmatic information in L2 acquisition, while the group results show pragmatic information is dispreferred for parameter resetting relative to semantic information.

Session C--Conference Auditorium

Lexical interpretation of phonetic variation:
Results from a task combining on-line recognition and explicit judgment in 2-year-olds

Daniel Swingley, University of Pennsylvania

Toddlers know how familiar words should sound, but do they know that phonological deviations from familiar words don't count as instances of those words? We evaluated children's decisions about words produced with phonological substitutions. Two-year-olds' eye movements were monitored as they saw a novel and a familiar object, while hearing sentences naming the familiar object. Its name was sometimes pronounced with a noncanonical consonant or vowel. Children were also required to choose the picture they considered the referent. Children chose the nonce object more when hearing mispronunciations than when hearing correct pronunciations, but familiar-object choices were most common. (When children heard non-neighbor nonce words, they picked the nonce object.) Children showed mispronunciation-driven eye movement effects even when choosing the familiar target: their brain knew something was wrong, but they chose the familiar object anyway. We discuss vowels vs consonants, and development of phonological interpretation more generally.

Notes

Session A--Metcalf Small

Statistical learning of hierarchical phrase structure
in 18-month-old infants

Eri Takahashi, University of Maryland - College Park

How do infants identify the phrase structure of their target language? Some have argued that semantic and/or prosodic correlates to phrase structure are necessary. Recent work has argued that surface distributional statistics may also contribute to syntactic acquisition. Thompson & Newport (2007) showed that adult participants can exploit transitional probabilities to acquire an artificial phrase structure grammar. This artificial grammar, however, contained phrases with no internal structure. Given that internally structured phrases are a hallmark of natural language syntax, these findings leave the issue of whether learners can detect statistical cues to internally structured phrases unresolved. Using the Headturn Preference Procedure, we find that 18-month-old infants can learn an artificial grammar with internally structured phrases based on the statistical distributions alone. These results add to a growing body of evidence that statistical distributions provide a reliable and usable cue to discovering syntactic structure.

Session B--East Balcony

The role of aspect in subject/object ambiguities: Evidence from
an eye-tracking experiment with Greek learners of English

Despina Papadopoulou, Aristotle University of Thessaloniki
Leah Roberts, Max Planck Institute for Psycholinguistics
Ianthi Tsimpli, Aristotle University of Thessaloniki
Sarah Liszka, University of London Institute in Paris

Following previous work by Frazier et al. (2006) and Roberts & Liszka (2007), we investigate the role of grammatical aspect in the disambiguation of subject/object ambiguities in L1 Greek and L2 English. Two eyetracking studies were carried out, one in Greek with 20 native speakers and one in English with 30 Greek learners:

1 Kathos i Maria majirepse/majireve ta makaronia epes-e/-an sto patoma

cooked-perf.3s/-imperf.3s fell-perf.3s/-perf.3p

2 As Mary cooked/was cooking the spaghetti (she) fell on the floor

Preliminary results reveal that in both Greek and English the subjects are only garden-pathed with perfective verbs. Reading times for the imperfective/progressive suggest that they do not initially misanalyse the ambiguous NP as DO when the verb is imperfective. Taken together with earlier results this suggests (a) a cross-linguistic difference between Greek and English in the parsing of such ambiguities and (b) that L2 learners transfer this processing strategy to their L2.

Notes

Session C--Conference Auditorium

Non-distinct lexical representations of L2 words: Evidence
from homophony effects

Mitsuhiko Ota, University of Edinburgh
Robert J. Hartsuiker, Ghent University
Sarah.L. Haywood, University of Edinburgh

Phonological representations of L2 words may not be completely distinct in the mental lexicon when they involve contrasts lacking in the L1. In order to isolate the effects of such representational indeterminacy from those of speech perception, we designed two experiments building on the finding that homophones can induce identification errors and slower processing in silent reading. Native speakers of English, Japanese, Spanish, and Arabic carried out a visual semantic categorization task and a semantic-relatedness decision task in English. The results show that, when controlled for writing systems, L2 speakers are more likely to commit false positives and show slower reaction times with homophones and also minimal pairs that involve a non-L1 contrast than with spelling-matched control words. Since the effects are not direct consequences of auditory misperception, they provide independent evidence that phonemic mismatches between the L1 and L2 can lead to non-distinct mental lexical representations of L2 words.

Session A--Metcalf Small

Investigating the cause of language regularization in adults:
Memory constraints or learning effects?

Carla Hudson Kam, University of California - Berkeley
Ann Chang, Cambridge University
Jessica Morrison, University of California - Berkeley

Learners exposed to inconsistent probabilistic grammatical patterns sometimes impose consistency on a language instead of learning the variation veridically. This is especially true of children (Austin, Newport & Wonnacott, 2006; Hudson Kam & Newport, 2005), but adults will also regularize under certain circumstances (Hudson Kam & Newport, in press; Wonnacott & Newport, 2005). We investigate the possibility that regularization results, not from some learners acquiring a more consistent grammar than others, but rather, the retrieval difficulty some speakers have at production. We exposed adult learners to a miniature language known to induce regularization but eased the retrieval demands during the production test and found probability-matching. Next we exposed a different group of adults to a language less likely to induce regularization but made production more difficult and found regularization in many participants. These results suggest that, at least in adults, regularization results from aspects of production rather than learning.

Session B--East Balcony

Can we predict when "dying" will be difficult?: Progressive achievements in L2 English

Alison Gabriele, Junko Maekawa, and Jose Alemán-Bañón
University of Kansas

Research has shown that in L2 English, progressive marking begins with activities and only later extends to accomplishments or achievements. Shirai and Andersen (1995) proposed that this pattern emerges because activities represent the prototype for the progressive, but very little research has focused on how learners extend beyond the prototype. Achievements such as 'die' are interesting in that they interact differently with markers of progressive aspect across languages. While achievements are compatible with the progressive in English and Korean, this combination is ruled out in Chinese. We investigated the interpretation of progressive achievements in L2 English by advanced Chinese and Korean learners to examine whether there is evidence of universal difficulty, as the prototype hypothesis suggests, or whether similarity between the L1/L2 can facilitate acquisition, as a transfer model would predict. Results show better performance for the Korean learners, supporting transfer, but native-like attainment is not reached in either group.

Session C--Conference Auditorium

Induction of phonotactics from word-types and word-tokens

Peter Richtsmeier, LouAnn Gerken, and Diane Ohala
University of Arizona

In this presentation we will present data that support abstract phonotactic probability learning based on type and token variability. Across four experiments, we systematically varied exposure to the number of words (type variability) and the number of talkers (token variability) that could be taken as evidence of a phonotactic sequence. The exposure came in a "familiarization followed by testing" procedure that is commonly used with infants, but was modified for use with four-year-olds, who first listened to make-believe animal names (familiarization) and later said the names of new animals back (testing). The results show that children's speech accuracy was influenced by a combination of type and token variability, but not by either factor in isolation. That is, children were more significantly accurate when producing some target phonotactic sequences when they heard them spoken by multiple talkers in multiple words, but were unaffected by either talkers or types alone.

Notes

Session A--Metcalf Small

Schwa syllables facilitate word segmentation for 9-month-old German-learning infants

Sonja Bartels, University of Potsdam
Isabelle Darcy, Indiana University
Barbara Hoehle, University of Potsdam

In German, schwa syllables have a very characteristic distribution: schwa never occurs in the word-initial position and cannot be the only vowel of a word. Rather, schwa syllables mostly appear at the end of words, forming a trochaic unit with the stressed penultimate syllable (e.g. Blume ['blu:mə] 'flower', Banane [ba'na:nə] 'banana'). A series of experiments run with the Headturn Preference Procedure explored whether German-learning infants are sensitive to this fact and use it to segment words from fluent speech. The results suggest that 9-month-old German-learning infants are not only sensitive to rhythmic information but also to the distribution of schwa syllables in German and combine these cues to segment words from fluent speech. While this strategy works well for German, it is not equally suitable for other languages (e.g. English). Overall, the experiments show that infants adapt their segmentation strategies to their native language at a very young age.

Session B--East Balcony

Syntactic frames and morphological cues in the acquisition of adjectives in child English and child Russian

Elena Gavruseva, University of Iowa

Recent inquiries into word learning (e.g. Mintz & Gleitman 2002) show that 2- and 3-year olds fail to extract and generalize adjectival meaning if multiple exemplars are labeled with the proforms 'one' or 'thing'. M&G's results are interesting because the syntactic frame "really ____" rules out nominal interpretations (*really dog'). This paper asks whether children (ages 2-4) use syntactic cues to infer adjectival meaning by comparing their responses to the stimuli presented in English and Russian. Another question is whether adjective-specific morphology in Russian provides an edge in word learning. Two sets of experiments were conducted, with children hearing novel words in predicative position and a structure that requires like categories (coordination frame). The cross-linguistic comparisons indicate that the type of cue (morpho-syntactic or syntactic) does not have a significant effect on adjective acquisition if word learning occurs in the context of multiple exemplars introduced by a lexical noun.

Notes

Session C--Conference Auditorium

Acquisition of split-ergativity in Kurmanji Kurdish

Laura Mahalingappa, University of Texas - Austin

This study examines the acquisition of split-ergativity in Kurmanji Kurdish where there is a weakening of the ergative construction in the language. Data include spontaneous speech samples and experimental data from children (2;0-4;6) and caretakers. Data from caretakers show a limited use of the ergative-absolutive construction in the past tense, as well as ergative case-marking used more often on agents than patients and pronouns than nouns. These data suggest highly variable case-marking as input for children. However, children used similar case-marking patterns to adults; there was no significant difference in use between adults and children and children of different ages. Thus it is unclear whether children are acquiring a split-ergative system or if they are using patterns seen in the adult community; however, data suggest that when children are faced with variability present in their language input, they ultimately conform to the variability modeled by the adult community.

Session A--Metcalf Small

Perceptual constraints on segmentation of speech and non-speech

Jessica Hay and Jenny Saffran
University of Wisconsin - Madison

Infants use powerful, domain-general, learning mechanisms to track statistical regularities in their environment. In the present set of studies we sought to determine whether infants' own perceptual systems guide their statistical learning during segmentation. We tested the hypothesis that 6- (Exp. 1) and 9-month-old (Exp. 2) infants, like adults, expect louder sounds to occur at word onsets and longer sounds at word offsets, and asked whether linguistic experience is necessary for these expectations to act as perceptual constraints on segmentation. Results demonstrate that linguistic experience is necessary for perceptual constraints to emerge, at least in the case of duration-varying stimuli. A follow-up study with 9-month-olds (Exp. 3) further suggests that linguistic experience has domain-general effects on perception. Thus, together our findings indicate that infants' perceptual systems function jointly with linguistic experience to constrain statistical learning during speech and non-speech segmentation.

Session B--East Balcony

Real-time processing of postnominal adjectives by Latino children learning Spanish as a first language

Adriana Weisleder and Anne Fernald
Stanford University

This study investigates Spanish-learning children's comprehension of attributive adjective phrases. These phrases may be challenging because listeners must interpret the meaning of the adjective in relation to the noun it modifies. In addition, because language unfolds sequentially, the order in which the noun and adjective appear might affect their processing. In a previous study, English-learning 30 month-olds had difficulty interpreting phrases with informative adjectives that were heard prenominal (Thorpe & Fernald, 2007). Here we investigate the processing of noun-adjective phrases by children learning Spanish, a language where the adjective follows the noun. Children viewed paired pictures while hearing sentences combining familiar color words and nouns (e.g., 'Donde esta el carro rojo'). We found that Spanish-learning children (n=22, 38-44 months) interpreted these phrases incrementally and were not disrupted by the adjective. This finding suggests that language-specific differences in the sequential order of nouns and adjectives have implications for real-time sentence comprehension.

Session C--Conference Auditorium

How Polish children switch from one case to another when using novel nouns

Grzegorz Krajewski and Anna Theakston
University of Manchester

This paper investigates children's (2;6 and 3;6) productivity with Polish noun inflections. Thus far, wug-type elicitation tasks have introduced novel nouns in nominative case only. This overlooks the fact that children hear nouns in various cases, which may affect their productivity with novel forms. In this study, we elicited various noun inflections from children when they were presented with novel nouns in a number of different cases. Our results suggest that, rather than describing particular inflections as 'easy' or 'difficult', one should consider transitions from one form to another. The same inflectional form may be easy or difficult depending on what form serves as a departure point. At the same time, an easy or difficult departure point for one form may have a different effect for another. Similarity between forms is a key factor. The constructions in which source forms were introduced and target forms were elicited also affected performance.

Notes

Session A--Metcalf Small

Frequency and prosody bootstrap word order:
A cross-linguistic study with 7-month-old infants

Judit Gervain and Janet Werker
University of British Columbia

Learning word order is a major task infants face. We report two studies with 7-month-old infants, exploring how frequency and prosody bootstrap word order. In Study 1, we compared Italian and Japanese infants' word order preferences, as cued by frequency. Italian and Japanese have opposite word orders (Italian: V(erb)-O(object), Japanese: OV). This is also reflected in the order of functors (high frequency words) and content words (low frequency words). We tested 7-month-olds on 'sentences' from an artificial language with [frequent-infrequent] and [infrequent-frequent] word orders. Japanese infants preferred the [infrequent-frequent] sentences, Italians the [frequent-infrequent] ones, mirroring the order of functors and content words in their respective native languages. In Study 2, we tested VO-OV bilinguals, assessing whether OV or VO prosody might bias bilinguals towards the corresponding word order. Preliminary results from the VO familiarization group indicate that infants looked longer at the VO, i.e. frequent-infrequent items.

Session B--East Balcony

The use of referential context in children's
on-line interpretation of scalar adjectives

Yi Ting Huang, Harvard University

Adult language comprehension is characterized as incremental and opportunistic. In contrast, prior research demonstrates that children typically fail to use top-down contextual cues. To examine the scope of this phenomenon, these experiments explore the role of referential information in the interpretation of scalar adjectives like *big*. Since application of these terms requires comparison across members of a category, we might expect context to play a prominent role in interpretation. Five-year-olds were asked to "Point to the big coin" and their eye movements were measured to items which varied in size and category membership (*big coin* vs. *small coin* or *small rvbutton*). Children used the presence of a within-category contrast to restrict the referent of the noun phrase. This pattern indicates an early emerging sensitivity to contextual information during real-time comprehension and suggests that previous failures cannot be due to an inability to encode or use referential contrast during comprehension.

Notes

Session C--Conference Auditorium

The delay of Italian past participle agreement

Vincenzo Moscati, University of Siena
Roberta Tedeschi, University of Utrecht

Past-participle agreement is obligatory in Italian when the direct object is realized by means of a clitic pronoun: in this paper we will present new empirical data showing that the acquisition of object-Past Participle agreement in Italian is delayed w.r.t. other forms of agreement (i.e. determiner-noun, subject-verb). Data were collected using an elicited production task, testing 55 monolingual Italian-speaking children between age 2;0-4;10. The results show that Italian children systematically allow the default past participial form even in those cases where this form is not allowed in Standard Italian. We consider this result as evidence for the presence of a developmental stage where past-participle agreement is optional. This phenomenon is reminiscent of other romance languages, as French, and it can be explained by assuming that initially children adopt a non local mechanism to check agreement (Guasti & Rizzi, 2002) instead of the adult spec-head local configuration (Sportiche, 1996).

Session A--Metcalf Small

Mechanisms of segmentation and morphological learning in infants

*Rushen Shi and Alexandra Marquis
University of Quebec - Montreal*

This study examines morphological segmentation when speech cues and statistical cues are in conflict. Frequent sub-syllabic functor morphemes (e.g., -ing) typically occur with many different stems, yielding statistical support for correct morpheme boundaries, while resyllabification and coarticulation signal a different (wrong) boundary (e.g., wal-king). French-learning 14-month-olds were familiarized with a nonce word: half with /glate/ (/e/: is a frequent French functor morpheme) and the other half with /glatu/ (/u/: is not a French morpheme). All infants were tested with /glat/ versus /gla/. If infants use statistical information rather than syllabic/coarticulation cues, they should prefer /glat/ (the stem of /glate/) over the non-stem /gla/ only [this word should be included to make the prediction unambiguous] only when familiarized with /glate/. As predicted, infants familiarized with /glate/ preferred listening to /glat/ over the syllabic /gla/. Infants familiarized with the monomorpheme /glatu/ showed no preference, i.e., treating /glat/ and /gla/ as unrelated to /glatu/. These findings demonstrate that when speech cues and statistical cues are conflicting, 14-month-olds can use statistics for successful morphological segmentation.

Session B--East Balcony

Who has more? The role of the input in quantity judgements with count/mass nominals

*Cristina Schmitt, Michigan State University
Karen Miller, Calvin College*

Barner & Snedeker 2004 have shown that children use number morphology to distinguish count/mass interpretations of nominals in English (more string vs. more strings, for example). We replicate their experiment in Brazilian Portuguese and Chilean Spanish, which have a fair amount of variability in plural realization. In BP, the variability is linked to a rule that targets agreement. In ChS, variability is the result of a phonological process. While BrP children distinguished count vs. mass ($t(1,77) = -5.433, p < .01$), ChSP children did not. ChS children ignored plural morphology and assigned a mass reading to both "mass and count" syntax.

Session C--Conference Auditorium

Understanding speaker's communicative intent – bilingual children's heightened social awareness in communicative cues

W. Quin Yow and Ellen Markman, Stanford University

Bilingual children's greater need to monitor different speakers' communicative requirements could heighten their sensitivity to pragmatic and communicative cues. We examined young monolingual and bilingual children's use of pointing and eye gaze when interpreting a speaker's referential intent. Study 1 required 2-to-4-year-olds to find a toy in one of two boxes while the experimenter pointed to or gazed at the correct box, either seated equidistant between two boxes or behind the empty box ("biased"). Bilingual children more effectively used the cues to locate the toy, especially when cues were provided in "biased" positions. Study 2 showed 3-year-olds pairs of novel objects such that the experimenter could see only one. The experimenter requested the toy saying either "There's the [novel-word]!" or "Where's the [novel-word]?" while looking at the mutually-visible object. Bilingual children were better able to modulate these cues as a function of context, picking the nonvisible object when asked "where".

Notes

Session A--Metcalf Small

Regularity learning in 7-month-old infants under 'noisy' conditions: Adjacent repetitions vs. non-adjacent repetitions

Agnes Melinda Kovacs, Jacques Mehler
Scuola Internazionale Superiore di Studi Avanzati

A fundamental task in language learning is to extract adjacent and distant dependency relations. Previous studies suggest that infants learn repetition-based regularities when exposed to speech-stimuli conforming to one pattern (Marcus et al., 1999). However, infants are naturally exposed to a 'noisy' signal that contains multiple regularities. In three eye-tracker experiments we explore whether infants extract regularities from a bimodal input and whether they integrate them into differential eye-movements. In the case where 7-month-olds were familiarized simultaneously with adjacent and non-adjacent repetitions, they generalized the adjacent repetitions. However, they generalized the non-adjacent repetitions when these were contrasted with random patterns. When exposed to non-identical adjacent repetitions and identical non-adjacent repetitions, infants generalized the adjacent regularity. The results show that preverbal infants possess powerful abilities to extract regularities from 'noisy' inputs. They manage to find the more salient regularity and presumably, for an efficient learning, consider other evidence as noise.

Session B--East Balcony

Using syntax to learn about number word meaning: Successes and challenges of a bootstrapping approach

Kristen Syrett, Julien Musolino, and Rochel Gelman
Rutgers University - New Brunswick

We ask whether children are aware of the semantic constraints of certain syntactic environments (1-2), and recruit this knowledge when extending word meaning to a quantity or predicate interpretation.

1. Partitive:
 [two / *happy] of the children
2. a. exactly [two / *happy] children
 b. very [*two / happy] children

30 children (M=3;9) heard subsets of two red objects described as 'pim of the objects.' At test, they were shown two blue and three red objects and asked to locate (a) 'pim of the objects' or (b) 'pim objects.' Children who heard (a) assigned a quantity interpretation (77%), in contrast to (b) (38%). Robust performance on a What's-on-this-Card task coupled with other children's (M=3;9; n=12) ability to assign a predicate interpretation with 'very' (90%) demonstrates children know about these constraints, but mapping to number word meaning is fragile. Results from adults and from older children with 'exactly' provide further support.

Notes

Session C--Conference Auditorium

Narrative structure in children's speech and gesture

Ozlem Ece Demir, Susan Goldin-Meadow, and Susan Levine
University of Chicago

Coherence is macro-level organization of the narrative content. Cohesion is micro-level relationships between propositions. Although preschoolers have difficulty structuring their narratives in speech, they might express this structure through co-speech gestures. Gesture might contribute to coherence through an iconic gesture conveying a main event, and to cohesion by displaying the same gestural feature every time a particular character is mentioned. We asked 5-years-old, English-speaking-children to retell a cartoon. For coherence, we coded whether children's narratives included main events of the story, and for cohesion, whether children used cohesive devices. Children indeed used gesture for coherence and cohesion. Furthermore, children who expressed less coherence and cohesion in speech used gesture uniquely to structure their narratives more often than children who expressed a better structure in speech, whereas this latter group used speech uniquely more often than the former group. Overall, we could see the seeds of narrative structure in children's hands.

Session A--Metcalf Small

The role of faces in segmentation:
Visual integration in a statistical learning task

Aaron Mitchel and Daniel Weiss
Pennsylvania State University

Segmenting words from continuous speech represents an initial challenge for language learners, potentially compounded for infants exposed to more than one language. Previous statistical word segmentation research suggests that simultaneously segmenting multiple input streams requires an indexical cue (e.g. speaker voice) to demarcate the input streams. Given the growing literature on the role of visual cues in early language acquisition, we explored whether such cues facilitate speech segmentation. We presented adult learners with incongruent artificial speech streams paired with a synchronous visual display of indexical talking faces, indexical static cues (background color), or non-indexical talking faces. We found that performance was greatest when the visual display consisted of indexical talking faces, suggesting that visual speech may facilitate the formation and maintenance of multiple representations. In contrast, individual speech streams in isolation did not benefit from face displays. We end by discussing implications of audio-visual integration for theories of bilingual acquisition.

Session B--East Balcony

Language and the acquisition of number concepts
Anna Shusterman, Wesleyan University

The current study addressed the relation between language acquisition and conceptual development of children's number knowledge by using both verbal and non-verbal tasks with preschoolers (36-63 mos). To assess verbal knowledge, children performed the give-a-number task and a verbal estimation task. To assess non-verbal knowledge, children were shown stuffed toy caterpillars with different numbers of feet (1,2,3,6,7,9). Children were prompted with a story, but no explicit number language, to bring 'just enough socks' from across the room. All children were accurate in the low-number range. Only Cardinal-Principle (CP) knowers differentiated the high numbers in the implicit task, while subset knowers did not. Performance on the verbal and non-verbal tasks was correlated even after controlling for age. Direct use of verbal tools like counting or estimation did not explain CP-knowers' superior performance. These data indicate that concepts and language for numbers above three are refined in parallel during development.

Session C--Conference Auditorium

Processing figures and grounds in dynamic and static events

Tilbe Goksun, Temple University

Infants notice components of motion events relevant to relational term learning such as path-manner (Pulverman et al., 2008), containment-support (Casasola, 2008), and source-goal (Lakusta et al., 2007). Two fundamental yet unexplored components of events are figures and grounds. Like path-manner, figure and ground are packaged differently across languages. Japanese, for example, incorporates ground into the verb where 'crossing a road' (barrier between start and end points) is codified differently than 'crossing a field' (no barrier). These Japanese ground-path verbs are only distinguishable in dynamic events. Two studies tested 1) English-reared 8- and 11-month-olds' discrimination of figures and grounds in dynamic and static events, and 2) whether English reared infants are sensitive to Japanese ground distinctions. 11-month-olds differentiated figures and grounds consistent with the Japanese categorical distinctions in dynamic events but not in static displays. Results suggest a developmental pattern for dynamic event detection and prelinguistic capability of making non-native distinctions of grounds.

Notes

Spatial language and spatial cognition: Origins, development, and interaction

*Barbara Landau
John Hopkins University*

The domain of human spatial representation has long provided fertile territory for examining questions about the origins and nature of semantic primitives, the role of non-linguistic representation in the early acquisition of spatial language, and the role of language in causing changes to non-linguistic spatial representations. Departing from simplistic hypotheses about the relationship between spatial language and non-linguistic spatial representation, I will discuss evidence showing that these two systems share partial overlap and homologous structure, but that each also exhibits unique properties. The homologies between the two systems allow infants to begin learning spatial language, but the developmental trajectory of spatial language learning suggests that the system of spatial semantics is poised quite early to pull away from its non-linguistic roots. Finally, the differences between the two systems allow each to strengthen the other. The effects of language on spatial representations are powerful, but they are momentary, causing no permanent change in non-linguistic representations.

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POSTER SESSION I

Syntax informs two-year-olds' expectations
about verb meaning

Sudha Arunachalam and Sandra Waxman
Northwestern University

When toddlers view an event while hearing a novel verb, the verb's syntactic context has been shown to help them guess its meaning. This work further demonstrates that syntactic information encourages toddlers to form hypotheses about verb meaning even before viewing an event. Building on Yuan and Fisher (2006), who demonstrated that toddlers used the number of nouns in a sentence to infer how many actors the event should involve, we introduced 25- to 29-month-olds to novel verbs used either transitively or intransitively. They then saw two scenes: a) two participants performing synchronous actions, b) two participants performing a causative action. When asked to "find mooping", toddlers who had heard transitive sentences chose the causative scene; those who heard intransitive sentences did not. These results demonstrate that children infer meaning from syntactic structure alone, and use it to direct their subsequent search for a referent in a visual scene.

Notes

POSTER SESSION I

Quantitative effects on Yiddish/English bilingual development

Isabelle Barriere, Shoshy Frenkel, Fay Halberstam,
Susie Smedesdran, Erika Bergelson and Joyce Chen
Yeled v'Ylada Multilingual Development & Education
Research Institute

This study investigates two hypotheses on the morphosyntactic development of 82 Yiddish/English speaking toddlers.

1. Input-driven hypothesis

- (i) The acquisition of features that differ in the two languages are sensitive to the percentage of input in each language;
- (ii) The acquisition of features that are the same across the two languages are not sensitive to percentage of input.

2. Rich Morphology Hypothesis in balanced bilinguals

- (i) According to the Interaction Hypothesis, bilingual morphosyntactic development depends on the characteristics of each language resulting in the earlier emergence of morphosyntactic features in one language;
- (ii) According to Rich Morphology Hypothesis the lead language is the one that expresses morphosyntactic features through a fuller paradigm.

The results indicate a lack of effect of the percentage of input on bilingual morphosyntactic development between 100% and 50% but a delaying effect when the input is 25% or 10%.

Notes

Notes

POSTER SESSION I

Five-year-olds reliance on verb in sentence parsing

*Youngon Choi, Elizabeth Grinnell, and Mallory Wetstone
Skidmore College*

Five-year-old English-speaking children show sensitivity to lexical constraints but not to reference-to-scene constraints in structural ambiguity resolution (Trueswell et al., 1999). This verb-constraint priority observed in child parsing might be attributable to the constraint distribution pattern in English, with verbs having temporal advantage over other sources. The present study examined whether the timing at which verb information becomes available in a sentence influences the child's parsing pattern. When verb information was delayed to the end of the sentence, children were less prone to commit interpretation errors than when it appeared at the beginning. Still, the referential context was not an influential factor. These results provide additional support for previous findings that children are sensitive to the distribution pattern of various constraints in making parsing decisions. And the error patterns previously observed among children are related to the timing at which a source of critical constraint becomes available in a sentence.

Notes

POSTER SESSION I

The role of parental mental-state talk in the development of social understanding

*Michelle Chouinard and Lizbeth Duran
University of California at Merced*

How do children come to understand other people's minds? Previous work suggests that conversation is related to the development of children's social understanding, but the direction of causality is uncertain. To investigate this, we conducted a longitudinal training study giving 80 parent-child pairs six storybooks to read together at home. Participants in the High-Mental-State-Talk condition were given storybooks with a large amount of mental-state talk. Participants in the Low-Mental-State-Talk condition received storybooks with the same pictures, but with different stories containing limited mental-state talk. After the six weeks, children took a standard false-belief task. We predict that children in the HMST condition will show significantly better performance on the false-belief task. Two follow-up studies investigating the amount of training needed, and which types of mental-state talk are most effective, will be discussed. These findings have important implications for how conversation impacts how children learn about the world.

POSTER SESSION I

Metalinguistic awareness in monolingual and bilingual children and its relationship to receptive vocabulary scores and performance on a reading readiness test

Denise Davidson and Vanessa Raschke
Loyola University

Ninety-eight five- and six-year-old monolingual (English) and bilingual (English/Urdu; English/Spanish) children were presented with a metalinguistic task, a reading readiness task and a receptive vocabulary task. The metalinguistic awareness task consisted of a syntactic awareness measure that asked children to state (and explain) whether 30 sentences "sounded ok." All children were equally proficient in detecting grammatically correct sentences, whereas bilingual children who were proficient in both languages were better than monolingual children at detecting grammatically incorrect sentences. This was true regardless of the language bilingual children were tested in. The TERA-III was positively correlated with children's ability to detect grammatically incorrect sentences, and with the English PPVT for monolinguals and more proficient bilinguals. More proficient bilinguals also scored higher than monolinguals on the TERA-III. These results will be discussed in terms of potential bilingual advantages on syntactic and reading readiness measures.

POSTER SESSION I

Pied-piping in embedded contexts in the acquisition of English: A qualitative analysis of comprehension

Claire Foley, Boston College

An act-out task tested ten children (5;0-7;11) and ten adults in sentences like (1-2):

- (1) Tensed relative clause
 a. Eeyore pushes the boat [behind which Pooh runs t]
 b. Eeyore touches the boat [which Pooh runs behind t]

- (2) Infinitival relative clause
 a. Pooh picks the blanket [under which to rest t]
 b. Pooh picks the blanket [Op to rest under t]

A qualitative analysis showed that children interpreted pied-piping and preposition-stranding with similar success. However, responses revealed an unexpected eventive-type reading for (1a), but not (3).

- (3) Bert kicks the box [under which Cheezer hides t]
 Eventive reading, for (1a): Eeyore pushes boat; then Pooh begins running behind Eeyore and boat
 Non-eventive reading, for (3): Cheezer hides under box, then Bert kicks box

Children thus draw on prepositional semantics and pragmatics in selecting relative clause attachment level (noun vs. clause).

POSTER SESSION I

Oral reading fluency's relationship with reading comprehension

Lindsay Goldberg, Franklin and Marshal College

This research investigated the degree to which reading comprehension is related to both oral reading fluency and attention skills. In this study, 38 fourth-grade students from elementary schools in Lancaster, PA read two short passages aloud and then answered questions about the content of each passage to test their comprehension. Their attentional skills were assessed by researcher observation, teacher report, and parental report. Results indicate that fluency alone is not predictive of reading comprehension. Other mechanisms, such as attention, play a vital role in determining comprehension from fluency. Additionally, inconsistencies found between researcher and teacher assessments of student fluency and comprehension are considered as topics of further investigation.

Notes

[illegible]

POSTER SESSION I

Quantifiers as a window into set representations:
Evidence from children learning Japanese and English

*Amanda Libenson, Pierina Cheung, and Mayu Takasaki,
University of Toronto
Neal Snape, Hokkaido University
David Barner, University of Toronto*

Japanese children are significantly delayed in comprehending the word one relative to English children (Sarnecka et al., 2007). The current study investigated whether this delay results from a difficulty in understanding set representation in general, in which case Japanese children should also be delayed in quantifier development, or whether this delay is specific to numerals. We tested 72 English-speaking children and 104 Japanese children aged 23- to 60-months in their comprehension of number words and quantifiers. At age 2, although Japanese children's acquisition of numerals was delayed, their comprehension of quantifiers was better than that of English children. Thus, Japanese children delay was not in set representations in general, but specifically in their acquisition of integer meanings. We provide evidence from children's spontaneous speech that this delay may be due to a smaller degree of syntactic overlap in quantifier and number word usage in Japanese relative to English.

POSTER SESSION I

Learning thematic structure: Developmental changes in sensitivity to lexical and syntactic cues

Jeffrey Lidz and Rebecca Baier
University of Maryland- College Park

How do infants use a Noun Phrase's syntactic context to make inferences about its thematic relation? In 2 experiments comparing direct objects and prepositional objects, we show that syntax contributes differently for 16-month olds than for 19-month olds. The younger children rely more on the syntactic context than on the lexical representation of the verb, while the older children show the opposite pattern. Because sensitivity to the structural context precedes sensitivity to lexical properties of the verb, these data argue against theories in which the syntactic expression of thematic structure is derived by abstracting over knowledge of particular verbs.

POSTER SESSION I

Attention-getting strategies of deaf children using ASL in a preschool classroom

Amy Lieberman, University of California - San Diego

This study explored social interactions among deaf children and deaf and hearing adults in a classroom setting in which ASL was the primary mode of communication. Children's ability to attract and maintain the attention of their peers and teachers was investigated, in order to understand when and how the skills involved in visual attention develop. Analysis of peer interactions revealed that children used objects, signs, and conventional attention-getters (e.g. waving or tapping) to obtain attention. Analysis of individual differences showed a high correlation between age, language proficiency, and the number and type of initiations attempted. A developmental trend was observed, in which children's initiations became more linguistic and adult-like with increasing age and vocabulary size. By the age of three, children's initiation patterns were similar to those of the deaf adults. These findings suggest that early exposure to sign language enables children to develop the pragmatic skills necessary for interaction in a visual language.

Notes

[illegible]

POSTER SESSION I

Contextual factors and L2 Allophone Acquisition

Christine Shea and Suzanne Curtin
University of Calgary

We provide evidence suggesting that learners store information in exemplar-type representations over the course of L2 phonological acquisition. We collected data from two groups of adult native (L1) English speakers acquiring the stop-approximant alternations (bdg~βðy) in Spanish. This allophonic alternation occurs along a continuum of non-categorical realizations, conditioned by word position and stress, ranging from a stop consonant (post-pause, stressed syllable onsets, gato ‘cat’) to a vowel-like approximant consonant (intervocalic, unstressed syllable onset, aguilá ‘eagle’). Our data shows that learner productions initially reflect a categorical approach to the allophonic alternation, yielding stop-like segments in word onset and approximant-like segments in word medial position. However, as learning progresses, productions begin to reflect the interaction between stress and position. Our results indicate that learners store phonetic details over the course of acquisition and produce more gradient allophonic variants as learning progresses.

Notes

POSTER SESSION I

Candy bars hurt people: Inanimate subjects in child and child-directed transitives

Nola Stephens, Stanford University

Although inanimate-subject transitives are recognized as a feature of adult English, they are often assumed to be absent in child language. The present study of the CHILDES database corrects this assumption, showing that children as young as 2;0 spontaneously produce inanimate-subject transitives and that the frequency of these transitives in child speech closely mirrors the input. Child and parent inanimate-subject transitives also show similar semantic properties. For example, they involve a similar range of subject and object types, and they have the same aspectual features. These findings are consonant with the growing body of evidence that patterns in the input crucially influence acquisition. Additionally, the results cast doubt on the cognitive-based hypothesis that children first produce animate-subject transitives and only use inanimate subjects once their concept of agency expands to include nonprototypical members.

POSTER SESSION I

Acquisition of DP in the partitive structure

Helen Stickney, University of Pittsburgh

This study looks at the DP layer in the partitive structure (“a piece of that cake”) as a barrier to adjectival modification (“a crumbly piece of that cake” does not mean that the whole cake is crumbly). This study suggests that there is ambiguity in the syntax of DP and that children delay treating DP as a barrier to adjectival modification in the partitive until they have sufficient semantic/pragmatic evidence to do so. This semantic/pragmatic information is necessary for projecting a complete (rather than incomplete) DP structure. Data was collected from 56 children in a picture choice task contrasting partitives, pseudopartitives and prepositional adjunct structures. These data support previous claims that children are underrepresenting the syntax of DP in particular environments. These data also show that all determiner types have the potential for underrepresentation.

Joshua Viau and Barbara Landau, Johns Hopkins University

In this study, we probe the extent to which child language collapses across the conceptual domains of possession and location in encoding recipients and spatial goals in transfer events. We focus on two constructions used to describe such events in English: double-object datives (Sara gave Kai the ball) and prepositional datives (Sara gave the ball to Kai). In our elicited production task, two factors - event type (direct/indirect transfer) and goal type (animate/inanimate) - were fully crossed within subjects. Our results reveal that the distribution of subjects' dative constructions and verbs across these categories is asymmetric, suggesting (a) that datives map differently to the possessive and locative domains and (b) that directness of transfer and goal animacy are grammatically relevant aspects of event structure underlying the distinction between them. Furthermore, ongoing analyses suggest children are more restrictive than adults in terms of the verbs and frames they choose to describe transfer events.

POSTER SESSION I

Lexical knowledge drives toddlers' adaptation to novel accents

Katherine White and Richard Aslin, University of Rochester

Toddlers are highly sensitive to phonological changes in words, which could make it difficult for them to recognize familiar words when they are produced in a novel accent. Adults use top-down lexical knowledge to recognize words containing phonological mismatches caused by dialect or accent variation. We explored whether toddlers can similarly use lexical knowledge to recover the mapping between accented words and familiar referents. Nineteen-month-olds saw pictures of familiar objects and heard them labeled either with standard pronunciations (control group) or with systematic shifts of the vowels (accent group). Participants were then tested on their recognition of the standard and shifted labels. Both groups recognized the standard labels, but only participants in the accent group recognized the shifted labels. The accent group also generalized the vowel shift to words not heard during exposure. These findings suggest that lexical knowledge may help young word learners overcome potentially disruptive phonological variability.

Notes

[illegible]

POSTER SESSION I

Role of language in the development of singular-plural representation: Evidence from Mandarin-speaking children

Shu-Ju Yang, University of Chicago
Peggy Li and Susan Carey, Harvard University

Using a manual search paradigm, Barner et al. (2007) found that 22- to 24-month-old English-learning children's ability to represent singular vs. plural sets is correlated with their acquisition of the singular-plural morphology. Their study leaves the causal direction unspecified: Does learning of singular-plural morphology make the singular-plural representations more salient for deployment in non-linguistic tasks or is it the maturation of children's ability to represent singular-plural sets that allows them to learn the morphology? To address the question of causality, we tested Mandarin-learning children whose language is impoverished in singular-plural morphology. Experiment 1 verified 22- to 24-month-old Mandarin learning children do not yet know the ways Mandarin marks singular-plural. Experiment 2 showed that Mandarin learning children, despite lacking singular-plural knowledge in language, could pass the manual search task. Therefore, maturation of prior capacity to distinguish singular-plural sets allows children to pass manual search and to learn singular-plural morphology.

POSTER SESSION I

A role for attention in phonetic change?

Katherine Yoshida, University of British Columbia
Ferran Pons, Universiad Autònoma de Barcelona
Janet Werker, University of British Columbia

Phonetic perception becomes native-like by 10 months of age. A potential mechanism of change, distributional learning, affects the perception of 6- and 8-month-old infants (Maye et al., 2002), however, social interaction may be necessary in change by 10 months (Kuhl et al., 2003). We use a non-social distributional learning paradigm to explore whether attention may be an underlying factor of social interaction mediating phonetic change. In Experiment 1, 10-month-old English-learning infants heard tokens forming either a bimodal or flat (control) distribution from along a continuum that is not discriminated at this age. A median split based on visual attending revealed that only high-attending infants evinced learning. Experiment 2 increased the learning phase to allow all infants to become sufficiently high-attending, and revealed phonetic change. Thus, after phonetic categories have formed, attention appears to be important in learning. This suggests that social interaction may assist language learning by attracting attention.

POSTER SESSION I

2-year-olds learn and retain combinatorial facts about a new verb over a delay

Sylvia Yuan, University of Illinois - Urbana-Champaign

The syntactic bootstrapping hypothesis proposes that children use syntax to learn verbs. Recent findings suggest that when syntactic and referential contexts are separated in time, children still find the syntactic structure alone informative. This paper asks how robust children's verb learning is when syntactic and referential contexts are separated by much delay. 28-month-olds watched dialogues in which interlocutors used a novel verb in transitive ("Jim blicked the cat!...") or intransitive sentences ("Jim blicked!..."). After either a few minutes or one to two days, children saw two test events: a one-person action and a two-person action. Upon hearing the verb in isolation ("Find blicking!"), children who had heard the transitive dialogues looked longer at the two-person action than those who heard intransitive sentences. These and control results suggest that 2-year-olds' ability to learn and retain useful combinatorial facts about a new verb in a non-referential context is quite robust.

POSTER SESSION I

Learning Homonymous and Synonymous Words through Cross-Situational Statistics

Daniel Yurovsky and Chen Yu, Indiana University

To learn language, children must map speech sounds they hear onto objects around them. This problem can be simplified by mutual exclusivity - the bias to build one-to-one mappings (Markman & Wachtel, 1988). This bias, usually helpful, presents problems in learning homonyms and synonyms. Following the cross-situational paradigm (Yu & Smith, 2007, Smith & Yu 2008), we ask how learners apply mutual exclusivity in statistical word learning. Adults and 14-16 month old infants were exposed to a series of individually ambiguous learning trials composed of multiple artificial words and novel objects. Correct mappings could be inferred from cross-trial co-occurrence frequency. In the synonymous condition, half the words mapped to one object, while half mapped equally frequently to two objects. In the homonymous condition, half the objects mapped to one word, while half mapped equally frequently to two words. Learners applied mutual exclusivity flexibly and adaptively, acquiring both one-to-one and one-to-two mappings.

Notes

Session A--Metcalf Small

Generalisation of word-object associations:
A modelling account*Julien Mayor, University of Oxford*

We present a neuro-computational model using self-organising maps that accounts for the emergence of taxonomic responding in early word learning, as well as a rapid increase in the rate of acquisition of words observed in late infancy. The quality of generalisation of word-object associations is directly related to the quality of pre-lexical, categorical representations in the model. We show how synapto-genesis supports coherent generalisation of word-object associations and that later synaptic pruning minimises metabolic costs without being detrimental to word learning. The role played by joint attentional activities is identified in the model, both at the level of selecting efficient cross-modal synapses and at the behavioural level, by accelerating overall vocabulary acquisition. Overall, the model can account for the qualitative shift in the way infants use words – from an associationist to a referential use.

Session B--East Balcony

Children's production of unfamiliar word sequences is predicted by sequence predictability and semantics.

Danielle Matthews, University of Manchester
Colin Bannard, Max Planck Institute for
Evolutionary Anthropology

Usage-based theories of grammatical development propose that children's earliest syntactic generalizations are limited-scope constructions with productive slots (e.g. 'A piece of X') extracted from familiar word sequences (e.g. 'A piece of toast'). We explore two predictions - motivated by findings in the statistical learning literature - that children are likely to detect a slot in the final position of a four-word sequence if 1) the final word is unpredictable given the first three words (high slot entropy) and 2) the words observed in the final position are distributionally or semantically similar (high semantic homogeneity). Twenty-eight 2-year-olds and 31 3-year-olds were significantly more likely to correctly repeat unfamiliar variants of frequent constructions (e.g. 'A piece of brick') if that construction had high slot entropy and semantic homogeneity. These results illustrate how statistical learning might give rise to the kind of representations proposed in usage-based accounts of language acquisition.

Notes

Session C--Conference Auditorium

Manners and goals in pre-linguistic thought:
The origins of aspectual construal*Laura Wagner, Ohio State University*

To what extent is the infant's mind prepared to acquire the semantics of natural language? This study examines infant representations of a key semantic concept, telicity. Telicity is a feature of predicates: Telic predicates describe events with inherent endings (I ran to the store); Atelic predicates describe events without such endings (I ran). However, events in the world have no aspectual value: speakers predicate choices reflect their construal of events. Can 12-month-olds adopt Telic and Atelic construals of directed motion events? A habituation looking-time method was used, following Woodward (1998) and Lakusta et al. (2007). Three types of manners were tested (hopping, gliding, scooting) that varied in how goal-directed they appeared to adults. The results suggest that infants can adopt a Telic construal of directed motion events, through some but not all manners of motion; their goal-directedness was largely predictive of infants' taking Telic construals.

Session A--Metcalf Small

Input affects uptake:

How early language experience influences processing efficiency and vocabulary learning

Anne Fernald, Virginia Marchman, and Nereyda Hurtado
Stanford University

Two studies explore how early vocabulary learning is influenced both by maternal speech to the child and by the child's developing skill in real-time comprehension. The first study combines observational and experimental methods, revealing that the amount and quality of Latina mothers' speech predict language growth in Spanish-learning children over the second year. This research provides the first evidence that language input shapes speech processing efficiency as well as lexical development. The second study is an experiment exploring more deeply the link between early processing efficiency and vocabulary growth, asking whether differences in young children's skill in online comprehension are related to their success in an implicit word-learning task. The results show that early efficiency in speech processing is beneficial for vocabulary growth and that fluency in online comprehension facilitates learning.

Session B--East Balcony

Does meaning specificity facilitate verb learning and extension?

Weiyi Ma and Wilkey Wong, University of Delaware

Research shows that earlier-acquired verbs tend to be more imageable than later-acquired verbs in both English and Chinese (Ma et al., 2008). Ma et al. hypothesized that high imageability may reflect the specificity of verb meaning such that verbs with narrower meanings (e.g., to hammer) may be easier to learn than verbs with broader meanings (e.g., to build). This study, motivated by the imageability findings, tests the hypothesis that a verb performed with a restricted range of manners will be easier to learn and extend than a verb with more variable manners. Three-year-old children were taught a novel narrow verb and a novel broad verb and then tested on their mapping and extension to a new agent, a new object, and a new manner variation. Results indicate that narrower verb meanings do indeed facilitate verb fast-mapping. However, narrow verbs are harder to extend - especially to manner variations.

Session C--Conference Auditorium

Child Spanish comprehension of verbal tense morphology

*Teresa Pratt, Dan McCurley, Laura Wagner,
and John Grinstead, Ohio State University*

This study used a comprehension task, as opposed to naturalistic data, to better understand child Spanish speakers' interpretations of verbal tense morphology. Twenty-three Spanish-speaking children (mean age = 3;10) from Mexico City were introduced to a Winnie-the-Pooh puppet, who presented each child with a series of three pictures of himself. A modal, present progressive, and perfective representation of each action was included. Children were asked to point to the picture that corresponded to the tense and aspect of the spoken stimuli. Children were scored on their ability to select the corresponding picture. Upon passing training and filler tasks, each child completed 6 experimental trials. Children were largely able to successfully interpret tense and aspect information as it was conveyed in the adult-like cues. As such, we can assume that children at this age have a near adult-like understanding of tense and aspect as they are marked in Spanish morphosyntax.

Notes

[illegible]

Session A--Metcalf Small

A comprehensive analysis of the factors that predict children's vocabulary size at 19 and 25 months

Jae Yung Song, Brown University

Researchers have long sought to identify the factors contributing to individual differences in early vocabulary size (Hart & Risley, 1995). In this study we investigated the relative contributions of three factors: the acoustic quality of mothers' speech, the quantity of mothers' speech, and children's ability to recognize words. Of particular interest was the possible correlation between the acoustic quality of mothers' speech and children's vocabulary size (e.g., Do mothers who hyper-articulate vowels have children with larger vocabularies?). To this end, verbal interactions between 48 mother-child dyads were examined. Results from multiple regression analyses showed no correlation between the acoustic quality of mothers' speech and children's vocabulary size. However, the quantity of mothers' speech was a strong predictor of 19-month-olds' vocabulary size. By 25 months, when mothers' speech alone is presumably no longer the primary input for children, children's ability to recognize words was a better predictor of individuals' vocabulary size.

Session B--East Balcony

Lighten up: the acquisition of light verb constructions in Persian

Neiloufar Family, Institute for Cognitive Science Studies

Persian has a deceptively small repertoire of about 160 simple verbs which belies an intricate system of light verb constructions (LVC). LVCs range from transparent to idiomatic, with most constructions occurring somewhere in between. Only a handful of lexical items are available to productively express thousands of verbal notions. The current study presents new data gathered on a weekly basis from four Persian-speaking children between the ages of 1;11 and 5;0 over a six-month period. First-learned general verbs later serve as a basis for hundreds of different verbal notions. We calculated token and type frequencies of LVCs as well as of simple verbs and describe their progressive emergence in different LVCs. We investigate the proper usage of LVs by Persian speaking children through analysis of errors, highlighting patterns in the acquisition of the semantic organization of LVCs in Persian. Our results support a usage-based theory of language acquisition.

Notes

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Session C--Conference Auditorium

Acquiring (Hebrew) compositional telicity:
When is it ever complete?

Aviya Hacoheh, Ben-Gurion University of the Negev

I report experimental data on the acquisition of compositional telicity in 23 typically-developing Hebrew-speaking children (aged 7;9-14;6) and 9 adults. Using a TVJ, participants were presented with video-clips of incomplete events and had to judge whether the accompanying (a)telic predicate matched the event. Results show that adults rarely accept telic predicates as true descriptions of incomplete events (13%), while freely accepting atelic predicates as descriptions of the same events (89%). Data also reveal that both NP-type and definiteness play a crucial role in the derivation of Hebrew compositional telicity. Surprisingly, children were non-adultlike even at 14;6. Testing definiteness and mass/count independently, I find adultlike knowledge of definiteness, but not of the mass/count distinction. Based on these data, I argue that knowledge of definiteness and the mass/count distinction are both necessary conditions for the acquisition of compositional telicity. Furthermore, the order of acquisition is 1) definiteness; 2) mass/count; 3) telicity.

Session A--Metcalf Small

Acquisition of relevance implicatures in typically-developing children and children with autism

Peter de Villiers and Jill de Villiers, Smith College
D'Jaris Coles-White, University of Memphis
Laura Carpenter, Medical University of South Carolina

In relevance implicatures the central meaning in an exchange of utterances is left unsaid and the observer has to fill it in from what s/he knows about the topic under discussion and from reading the speakers' communicative intentions (Sperber & Wilson, 1986). So children with autism who have a delay in their theory of mind understanding may also have difficulty in understanding relevance implicatures despite the absence of a misleading literal meaning. In a study of the comprehension of relevance implicatures in 38 typically-developing children and 10 children diagnosed with "high functioning" autism there was strong developmental growth in the children's ability to report on the intended meaning of the speakers' responses. The children with autism lagged significantly behind the typically-developing children, though their vocabulary scores and non-verbal IQs were in the normal range. The best predictor of the autistic children's understanding of relevance implicatures was their theory of mind performance.

Session B--East Balcony

Maternal challenges in mother-child reminiscence

Julia Hayden, Harvard University

In order to be remembered, information must be rehearsed. Yet, because memory is constructive, memories themselves become subject to change every time they are rehearsed. For preschool-aged children, memory rehearsal frequently occurs within the context of parent-child conversation. Hence, the very process by which children learn to retrieve and retain memories (engaging in conversation about the past) is also what can change memory. The present study examines maternal-issued challenges and child responses within joint reminiscence. Such challenges present a unique opportunity to examine how parents and children engage in a negotiation of the "truth" when they have conflicting memories of the past. A fine-grained analysis of how such naturally occurring challenges play out in parent-child narrative discourse has implications both for children's narrative development and for autobiographical memory formation.

Session C--Conference Auditorium

Two in one: Evidence for imperatives as the analogue to RIs from ASL and LSB

Diane Lillo-Martin, University of Connecticut - Storrs
Ronice Muller de Quadros,
Universidade Federal de Santa Catarina

Salustri & Hyams (2003, 2006) argue that there is a 'universal core' of the RI stage: in null subject languages (NSLs), imperatives are an analogue to RIs, used to express irrealis and eventive mood. We tested the Imperative Analogue Hypothesis (IAH) by looking at the acquisition of languages which have both verbs which permit (agreement-licensed) NSs and verbs which do not. American (ASL) and Brazilian (LSB) Sign Languages have agreeing verbs, which license NSs, and non-agreeing 'plain' verbs, which do not (Lillo-Martin 1986; Quadros 1997). The IAH contrasts with a no-analogue hypothesis (NAH) in predicting the distribution of imperatives in the acquisition of these two languages. We counted the occurrence of imperatives with plain verbs and agreeing verbs, in relation to the total number of Eventive verbs of each type, in the transcripts of four children acquiring ASL and LSB. The results are as predicted by the IAH.

Notes

Session A--Metcalf Small

Acquisition of relevance implicatures and modularity

Anna Verbuk, McGill University

On the Gricean "language-based" account, conversational implicatures are computed by engaging in linguistic reasoning, and are viewed as part of the language module. On Kasher's (1991) Rationality account, conversational implicatures are produced by the non-linguistic competence, and are viewed as derived by rationality-based reasoning, also instrumental in deriving non-linguistic inferences. English-speaking children (5;1-8;1) were tested on computing Relevance implicatures and parallel in nature non-linguistic inferences. Because children engage in linguistic reasoning in computing Relevance implicatures but not non-linguistic inferences, the Language-based account predicted the latter to be less challenging. On the Rationality-based account, computing both types of inferences requires performing rationality-based non-linguistic reasoning; children were not predicted to perform better on computing non-linguistic inferences. Children performed significantly better on computing non-linguistic inferences, as the Language-based account predicted. Reasoning about language, specifically, about the role of seemingly irrelevant utterances in discourse, constitutes the main acquisition challenge presented by the Relevance implicatures.

Session B--East Baleony

The developmental profile of editing and repair strategies in narrative structure:

A cross-sectional study of primary school children

Lesley Stirling, Graham Barrington, Susan Douglas, and Kerrie Delves, University of Melbourne

This study reports an analysis of the developmental course of acquisition of written narrative ability in a sample of neurotypical children over the seven years of Australian primary education, with a focus on editing and repair strategies employed at different levels of structure. Children used a purpose-designed story-writing program to retell a stimulus story. Keystrokes were recorded allowing processes of narrative production, editing and repair to be tracked, not only at lexical and sentential levels but with respect to discourse level features such as episodic macrostructure and perspective marking. We compare the picture of developmental attainment shown by standard measures of narrative complexity in the final product with a more complex picture revealed through analysis of the process of production.

Notes

Session C--Conference Auditorium

Optional infinitives in children with Autism Spectrum Disorders and with Williams Syndrome

*Alexandra Perovic, Nadya Modyanova, and Ken Wexler
Massachusetts Institute of Technology*

This study compares the knowledge of finiteness in 10 children with Autism Spectrum Disorders (ASD) (mean CA=11;2; non-verbal IQ=73.9; vocabulary SS=69.4) and eight children with Williams syndrome (WS), matched on CA and non-verbal IQ. Using two elicitation probes from the TEGI (Rice & Wexler, 2001), we found considerable difficulties with both present and past tense, of regular and irregular verbs, in children with ASD only. These patterns confirm the reports of impaired knowledge of finiteness in ASD and its spared knowledge in WS, suggesting that ASD is a risk factor for impairment in finiteness, but this impairment does not seem to be associated with the level of non-verbal cognitive impairment. The results will be discussed in the light of deficiencies on more complex aspects of grammar (passives and raising) in WS and ASD, which suggest that grammar in WS may be subject to fractionation not previously reported in the literature.

Symposium Title: Brain mechanisms of language development: The promise and pitfalls of neuroimaging

Introduction

Richard Aslin, University of Rochester

This lunchtime symposium seeks to summarize what we have learned about language development and language processing in infants and young children by the following neuroimaging methods: Event-related potentials, structural and functional MRI, and near-infrared spectroscopy. A critical appraisal of each method as well as prospects for future advances will be discussed, both for normative development and for studies of clinical populations.

The promise and pitfalls of ERP research on the neural basis of language development

Debra Mills, Bangor University, Wales

The event-related potential (ERP) technique is one of the most widely used methods for studying neural activity linked to sensory, attentional, and cognitive processes across the lifespan. It is currently the most practical method for studying the neural basis of language development in individuals such as infants, who are not readily tested using other brain imaging techniques. With the recent availability of easy-to-use packaged ERP systems, many developmental scientists are setting up ERP labs. The great promise of this new wave of research lies in the nature of the developmental questions being asked. However there are potential problems for the field with the influx of new findings from researchers who do not have a long-standing background in electrophysiology. In this talk I will address some of the common pitfalls new ERP researchers encounter when collecting, analyzing, and interpreting ERPs.

The dynamics and anatomy of active sentence understanding

Colin Phillips, University of Maryland - College Park

In this talk I discuss the challenges and prospects for the cognitive neuroscience of language development, using a series of examples from research on sentence comprehension in adults, using EEG, MEG, and fMRI measures. Modern brain recording techniques offer genuinely impressive data on the timing and/or source of brain activity associated with language processes. The primary challenges for these methods lie less with the technology than with (i) the need for sufficient data to obtain good signal-noise ratios, and (ii) the need for cognitive hypotheses that match the temporal and anatomical granularity of the recording techniques. These challenges are exacerbated when working with children or special learner populations. I will show examples of how explicit cognitive models of 'active' on-line language comprehension in adults lead to a better understanding of electrophysiological and hemodynamic brain recordings, and will discuss some prerequisites for similar research with children.

Using Magnetic Resonance Imaging (MRI) to Investigate Structural and Functional Bases of Language and Language Impairment in Children.

Helen Tager-Flusberg, Boston University

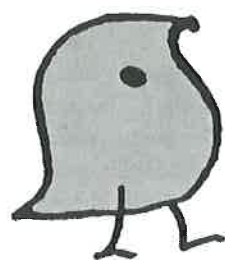
MRI provides a safe and relatively straightforward means for acquiring detailed information about the structure and function of the brain across all age groups, even in individuals with neurodevelopmental disorders. This presentation will provide an overview of the methods used to acquire high quality imaging data from children; the different technologies used to acquire information about the neuroanatomy (structural MRI), neural connectivity (Diffusion Tensor Imaging – DTI), and functional aspects (fMRI) of language processing; current knowledge about developmental changes in neural bases of language in typical children; as well as findings from children with language disorders, including specific language impairment (SLI) and autism spectrum disorders (ASD).

Near-infrared spectroscopy: Non-invasive imaging of the infant brain

Richard Aslin, University of Rochester

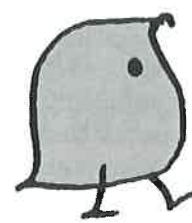
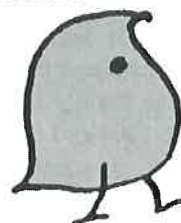
NIRS represents the newest neuroimaging method for use with infants and young children. It provides a spatially unambiguous measure of local brain hemodynamics but suffers from the sluggish timecourse of fMRI and is limited to cortical regions within 2 cm of the scalp. Nevertheless, it holds great promise for studies of populations where rigid head stabilization is not possible and it does not involve high magnetic fields or intense acoustic background noise.

In 1958, a wonderful creature was discovered...



THIS IS A WUG

*and for fifty years
we have asked...*



NOW THERE IS ANOTHER ONE.
THERE ARE TWO OF THEM.
THERE ARE TWO _____



Thank you, Wugs and their creator
Dr. Jean Berko Gleason, BU professor emerita,
for 50 years of inspiration.

From child language researchers everywhere

*Berko, J. (1958). The child's learning of English morphology. *Word*, 14, 150-77.

Session A--Metcalf Small

Infants' perception of language specific phonotactics

Stephanie Archer and Suzanne Curtin, University of Calgary

Legal sound combinations and the legal positions in which they can occur in a language are known as phonotactics. Between 6- and 9-months of age, infants begin to discriminate between legal and illegal phonotactic patterns of their native language (Jusczyk et al., 1993). By 9-months, they prefer non-words with high probability phonotactics to those with low probability phonotactics (Jusczyk, Luce & Charles-Luce, 1994). Our study investigates the sensitivity of six-month-olds to legal stop-liquid clusters based on type frequency. Using the Sequential Looking Preference procedure (Cooper & Aslin, 1994), we found significant differences in looking times for high and medium frequency onset clusters versus low frequency onset clusters. These findings suggest that as early as six-months of age infants are detecting differences in the frequency of occurrence in onset clusters. We discuss the implications of these findings in terms of input frequency and sonority constraints.

Session B--East Balcony

Number and gender in the L2 acquisition of Swahili

Patti Spinner and Jamie Thomas, Michigan State University

This study investigates the L2 acquisition of gender and number in Swahili. We asked: Do English-speaking L2 learners accurately mark gender and number on Swahili nouns, adjectives and numerals? We examined elicited oral production data from 20 English-speaking classroom learners of Swahili. There were two intriguing findings. First, gender marking is almost never incorrect/omitted on singular nouns; however, marking is frequently incorrect/omitted on adjectives. Second, learners are poor at marking number in Swahili on both the noun and agreeing items, despite the presence of Number in their L1. We argue that these learners do not parse gender prefixes as separate from the root. This may indicate that L2 learners are insensitive to derivational and inflectional morphology (Silva & Clahsen, in press). These findings are discussed in light of current theories that take the absence of feature marking in production as evidence of syntactic deficiencies (e.g., Hawkins & Liszka 2003).

Session C--Conference Auditorium

The role of phonology in L2 learning difficulties:
The cost of committing to sounds

*Amy Finn, Carla L. Hudson Kam, Marc Ettlinger,
and Mark D'Esposito, University of California - Berkeley*

Neural commitment to the phonological properties of a first language (L1) may enable more efficient learning of other aspects of language; however, it may also negatively impact the learning of other languages (L2s) when the phonology of the L2 differs from the L1. We exposed adult learners to one of two artificial languages differing only in their phonology and assessed the effect of the differences on learning and neural processing. One language had English-like phonology (EP), the other used sounds not present in English (NEP). After four days of exposure, participants were tested on vocabulary, verb-agreement, word-order, and determiners. Although vocabulary test performance was initially worse in NEP, this difference disappeared by the final day of learning. No significant differences were observed for verb-agreement, word-order, or determiners. On all measures, however, NEP performance was substantially more variable. fMRI scans on day 5 revealed interesting differences in neural recruitment for the two languages.

Notes

Session A--Metcalf Small

Structural biases in phonology: Infant and adult evidence from artificial grammar learning

Elika Bergelson and William Idsardi
University of Maryland - College Park

Are typological universals reflected in the language-learning mechanism? To test this, we examined adults' and infants' sensitivities to phonological patterns in 2 Artificial Grammars. Crosslinguistically, segmental rules refer to string-final elements (e.g. Russian word-final devoicing), whereas stress rules refer to relative-finality defined over vowels (e.g. French last-vowel stress). The opposite patterns (last devoicing and absolute word-final stress) are unattested typologically. In our experiments, adults and infants prefer the attested patterns, illustrating that the representations they acquire are constrained to mirror the properties exhibited by natural phonological systems. That infants and adults acquired only naturally occurring generalizations despite both generalizations' equal compatibility with the familiarization and equal incompatibility with English indicates that substantive constraints on possible phonological generalizations play an explanatory role in acquisition. Typologically, and in our experiments, segmental rules are biased towards 'final' environments and stress rules towards 'last'. These substantive typological generalizations therefore derive from the language-learning mechanism.

Session B--East Balcony

Restrictions on definiteness in L2 English

Lydia White and Alyona Belikova, McGill University
Paul Hagstrom, Boston University
Tanja Kupisch, University of Hamburg
Oner Ozelik, McGill University

In the English existential there-insertion construction, indefinite/weak expressions are permitted, while definite/strong expressions are excluded (e.g. 'There is a/*the fly in my soup'). Languages lacking articles nevertheless show some definiteness restrictions. Russian (no articles) and Turkish (no definite article) prohibit strong determiners in positive existentials, while showing no definite/indefinite contrast in negative existentials. We report on an experiment involving Russian- and Turkish-speaking English L2ers. We hypothesize that learners will initially assume that English is like the L1, permitting definite expressions in negative existentials, while more proficient L2ers will arrive at the appropriate L2 restrictions. The task involves contextualized acceptability judgments. Results show that advanced L2ers from both L1s respond like native speakers, accepting only indefinite/weak DPs in both affirmative and negative existentials. Lower proficiency L2ers accept certain strong DPs in negative existentials, suggesting transfer. The results suggest that subtle definiteness restrictions are acquirable, regardless of L1/L2 differences.

Notes

Session C--Conference Auditorium

The nature of childhood language memory:
Korean adoptees learning Korean as adults

Janet Oh, California State University - Northridge
Terry Au, University of Hong Kong
Sun-Ah Jun, University College London

Can early experiences with a language provide lasting benefits, even when that experience is limited to early childhood? In this study, we investigated language learning among Korean adoptees who were in the first week of Korean language courses ($n = 12$). All but one were adopted before age 1 year, and all had only minimal experience with Korean, if any, since adoption. They participated in a phoneme identification task in which target consonants were Korean stop consonants. Adoptees outperformed novice learners ($n = 13$) in identifying aspirated and lenis consonants, but not tense consonants. The findings indicate that childhood experience with a language can provide long-lasting and measurable benefits to the adult language learner, even when that experience is limited to the first year of life. Thus, relearning a language appears to be an effective way to reactivate childhood language memory.

Session A--Metcalf Small

The acoustics of [voice] in infant-directed speech and implications for phonological learning

Chandan Narayan, Daniel Swingley, and Kyle Gorman
University of Pennsylvania

Word-initial VOT and f0 perturbation were analyzed in the speech of female speakers from the Brent corpus of infant-directed speech (IDS) and from the Buckeye corpus of adult-directed speech (ADS). It was hypothesized that, consistent with the characteristics of IDS, caregivers enhance acoustic cues supporting [voice] category learning. While results showed that [+/-voice] tokens, as specified by VOT, are in fact less separable in IDS than in ADS, analyses suggest that in IDS, but not ADS, f0 contributes more to [voice] prediction in regions of the VOT spectrum that show an overlap between [voice] categories. In cases where VOT alone makes incorrect [voice] predictions, reclassification according to f0 yields significantly better performance in IDS compared to ADS. Thus, in the presence of unreliable VOT cues, infant learners may recover [voice] information from corresponding f0. Findings are situated within a discussion of acoustic input and phonological learning in development.

Session B--East Balcony

Antecedent preferences for anaphoric demonstratives in L2 German

Frances Wilson, Antonella Sorace, and Frank Keller
University of Edinburgh

The Interface Hypothesis (Sorace and Filiaci, 2006) proposes that while L2 learners are able to acquire narrow syntactic properties of the L2, phenomena at the interface with other cognitive domains are present difficulties. We discuss two visual world experiments which investigate L2 processing at the syntax-discourse interface, by examining the antecedent preferences for two different pronominal forms in L2 German: personal pronouns and anaphoric demonstrative pronouns. These anaphors are subject to different constraints on antecedent preference in native German speakers. We examine three constraints on anaphor resolution: grammatical role, topicality and thematic role of potential antecedents for these anaphors in L2 German, and show that L2 learners are not able to use these constraints in online processing in the same way as native German speakers. We conclude that L2 learners show a difficulty integrating different sources of information in real-time comprehension, supporting the Interface Hypothesis.

Session C--Conference Auditorium

Associations of ASPM genetic markers with language and non-verbal intelligence

Morten H. Christiansen, Keegan Kelsey, and J. Bruce Tomblin
University of Iowa

Although research in evolutionary genetics has indicated that the gene ASPM has been under strong selection in recent human history, the behavioral function of this gene has hitherto been unclear. We conducted a molecular genetic study in which 581 second-grade children were administered a range of tasks that measured speech, language, reading and intelligence. We found two genetic markers within ASPM that associated separately with language and non-verbal IQ, indicating ASPM is involved in at least two cognitive pathways. The language findings all involve either expressive phonology or reading, but not oral lexical or sentence use. Given the importance of phonological abilities to reading, it is plausible that phonology may be the relevant trait underlying these measures. This suggests that ASPM may play a role the development of language—particularly its phonological aspects—as well as cognition.

Notes

Session A--Metcalf Small

Putting things together: How children and adults distribute spatial information across the clause

Ozge Gurcanli and Barbara Landau
Johns Hopkins University

Recent research has emphasized extensive cross-linguistic variation in the encoding of spatial events as well as a large role for linguistic input for children to master these differences. We address the issue of universals and variation by analyzing a variety of linguistic tools (e.g. verbs, satellites, syntactic frame) that distribute spatial information across the clause. We examined how joining and separating events are encoded by child and adult speakers of Turkish and English focusing on a) the direction of the event (joining/separating), b) the degree of fit between objects (tight/loose) and c) the symmetrical status of the action. Overall, the findings show that child and adult speakers of these languages encode very similar aspects of meaning, using similar devices that are distributed somewhat differently across the clause. We discuss these findings in relation to the linguistic primitives available for the grammar of space and their organization in different languages.

Session B--East Balcony

Spoken word recognition abilities in toddlers who use cochlear implants

Tina M. Grieco-Calub, Jenny R. Saffran and Ruth Y. Litovsky
University of Wisconsin - Madison

The objective of this study was to assess spoken word recognition in young children who use cochlear implants (CIs). The 'looking-while-listening' procedure (Fernald et al., 1998) was used to measure children's accuracy in visually identifying target objects after hearing spoken labels, in quiet and in the presence of competing speech. Children between 2-3 years of age who use CIs (CI group) and age-matched peers with normal acoustic hearing (NH group) participated. Consistent with previous reports, the NH group was highly accurate at identifying target objects after hearing auditory labels. While the CI group performed significantly above chance, they were slower at identifying target objects and were less accurate than the NH group. Addition of competing speech to the task reduced performance in both groups. This study revealed the time course of spoken word recognition in young CI users, and may provide insight into the language processing skills of these children.

Notes

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Session C--Conference Auditorium

Children's restrictions on the meanings of novel determiners: An investigation of conservativity

Tim Hunter and Anastasia Conroy
University of Maryland - College Park

We investigate children's learning of determiner meanings, a topic at the intersection of two domains of research: children's word learning (focused on open-class items such as nouns and verbs) and children's understanding of quantifiers (largely focused on scopal interactions). Natural language determiners are all conservative, despite other logically possible determiner meanings. The arbitrary nature of this generalization suggests that it may derive from constraints on determiner learning. We present an experiment comparing the learnability of two novel determiners: one conservative, and one nonconservative. We taught each child one of these two novel determiners, using scenarios illustrated on cards. Children succeeded in learning the novel conservative determiner, but not the novel nonconservative determiner, suggesting that the generalization that natural language determiners are conservative may derive from a restricted set of hypotheses children consider for determiner meanings.

Session A--Metcalf Small

Spatial frames of reference and perspective taking in Tseltal Maya

Linda Abarbanell and Peggy Li, Harvard University

The prolonged acquisition of left-right terms has been used to argue that left-right concepts are not saliently available prior to language learning. To explore this, speakers of Tzeltal who do not use a left-right reference system were tested on a left-right perspective-taking task. In Experiment 1, speakers retrieved a coin they had previously seen hidden to the left, right, front, or back of a toy sheep after the entire array was rotated out of view of the participants. Tzeltal-speaking adults were successful on the front-back axis but at chance on left-right. In Experiment 2, participants who were initially unsuccessful on left-right during a pre-test showed significant gains during a training period where they were explicitly told that the coin was placed to the left/right side of the sheep. Their initial failure and subsequent success upon verbal labeling suggests that language highlights certain relationships without limiting the range of perspectives available.

Session B--East Balcony

Acquisition of tense marking in children with cochlear implants: A surface hypothesis account

*Ling-Yu Guo, Linda Spencer, J. Bruce Tomblin,
Elizabeth Walker, and Bruce Gantz
University of Iowa*

This study examined whether children with cochlear implants (CIs) acquired tense marking in the same pattern as typically-developing children via a story retell task and to what extent the surface hypothesis (Leonard, 1998) may account for the acquisition of tense marking in children with CIs. Six children who received CIs before age 2 retold stories after three, four and five years of listening experience. Typically-developing children matched for hearing experience were controls. Results revealed that older children marked tense more accurately than younger children. Children with CIs were significantly less accurate than the typically developing children regardless of age. Errors tended to be omission rather than commission errors in both children groups. We conclude that children implanted before age 2 may learn tense marking albeit with a delayed pattern, which supported the predictions of the surface hypothesis.

Session C--Conference Auditorium

Eye movements during the processing of ambiguous sentences with the focus particle 'only' in L1 acquisition

So Young Kim, University of Hawaii - Manoa

This study investigates how English-speaking children (5-6 years old) interpret, in real time, scope ambiguous sentences with a preverbal ‘only’ as in

Charlie is only walking the dog. --> Only Charlie is walking the dog (NP Scope)

-->Charlie is [only walking the dog] (VP Scope)

Prior research suggests adults favor NP scope while children prefer VP scope (Crain et al. 1994). An eye-movement-during-listening paradigm was employed in which participants heard a description of a picture and their eye movements were video-recorded. The results show that while adults are capable of accessing both NP and VP scope interpretations, they exhibit a default NP scope interpretation. However, in contrast to previous reports of children's failure to use contrast information (Paterson et al. 2003), the present study found that children employed contrast information and assigned NP scope. This suggests that children, despite presumably less-developed pragmatic knowledge, have the ability to mentally compute a contrast set for sentences with 'only' and access a NP scope interpretation in an adult-like way.

Notes

[illegible]

From input to mind:

How acquisition work captures the heart of linguistic theory and the soul of practical application

Tom Roeper

University of Massachusetts - Amherst

How does the child manage the interface between language, context and cognition in order to advance his (language particular) grammar? We will provide a panorama view of acquisition through snapshots of how the child moves from lexical to productive rules using theoretical principles like asymmetric merge, recursion, and movement. Pragmatics, implicatures, and the emergence of quantification all play a role in the child's world, a world full of half sentences (ellipsis), attitudes (implicatures) and hidden propositions (entailments). Strong innate assumptions about the interfaces between grammar and mind allow the child to convert what seems like excessive, confusing information into sharp steps along the acquisition path. These questions lead us to the recognition of new forms of language disorders (revealed through the DELV test (Seymour, Roeper, and deVilliers (2005)) and they can help us articulate the challenge of preserving a sense of children's dignity in the exploratory phase of scientific inquiry which, perhaps unavoidably, begins with simplistic versions of the human mind (as discussed in my book "The Prism of Grammar" (2007)).

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Weight-based processing biases in a connectionist model of English and Japanese syntax acquisition

Franklin Chang, NTT Communication Science Laboratories

While there are many verbal theories of language acquisition, there are few computational implementations of these theories that can learn different languages and account for adult performance during incremental sentence processing. To address this gap, a connectionist model of syntax acquisition and sentence production, the Dual-path model (Chang, Dell, & Bock, 2006), was used to create English and Japanese sentence production models. Although these languages differ in many respects, the model was able to learn each language equally well and under a similar developmental time-course. Also, the model was able to match both adult and developmental behaviors that differ in these two languages. Therefore, this universalist account of syntax acquisition can explain language-specific patterns in the development of sentence production biases. Experiments were performed to examine how this behavior arises out of the model's architecture and input.

POSTER SESSION II

Nigel Duffield and Ayumi Matsuo, University of Sheffield
Leah Roberts, Max Planck Institute for Psycholinguistics

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POSTER SESSION II

Measuring the emergence of yes/no questions:
Structural break estimation techniques

*Bruno Estigarribia, University of North Carolina
- Chapel Hill*

Determining when linguistic features are acquired is paramount in language development. Measures of emergence are usually age of first, repeated, or regular use, or some low percentage of use in obligatory contexts. This paper applies econometric techniques to data from English inverted and uninverted yes/no questions. Dating emergence is conceptualized as finding a timepoint when the series mean becomes significantly different from the initial zero mean. Empirical fluctuation methods test whether a series has structural breaks. F statistics and the Bayes Information Criterion select models with the optimal number and location of breakpoints. The empirical breakpoints for the CHILDES data show, for example, that reduced YNQs, but not uninverted declarative ones, emerge before inverted YNQs. In these tests emergence is independent from any arbitrary boundary: the larger the variable's variance, the larger the mean difference needed to detect a break.

POSTER SESSION II

Individual differences in preschoolers' text comprehension:
Contributions of verbal abilities, short-term and working
memory

*Elena Florit, Maria Chiara Levorato, and Maja Roch
University of Padua, Italy*

Studies on text comprehension in school-age children have shown that verbal abilities are strong predictors of reading comprehension, whereas the role of memory is still controversial. The present investigation aimed at extending the study of the contributions of these components to listening comprehension in preschoolers. Participants were 84 Italian children: forty-four 4-year-olds ($M = 54$ months, $SD = 4$ months) and forty 5-year-olds ($M = 64$ months, $SD = 5$ months). Tests for the evaluation of listening comprehension, receptive vocabulary, verbal ability, short-term and working memory were administered. Hierarchical multiple regression showed that verbal skills were the strongest predictors of listening comprehension and that memory skills accounted for a unique and independent amount of variance over and above verbal abilities. These components have been shown to have the same effect between 4-6 years. Results are discussed with reference to studies on reading comprehension.

POSTER SESSION II

Finiteness, subject-aux inversion and the head movement
constraint in child English

*John Grinstead, Valissa Warren, Cara Ricci
and Sarah Sanderson,
Ohio State University*

V-to-I-to-C movement is investigated in child English speakers. Our hypothesis is that children should mark verbs as finite to a greater or equal extent than they invert subjects and verbs. We measure these abilities using paired grammaticality judgment tasks. In experiments 1 and 2, a group of child English-speakers ($n = 63$, mean age = 4;10, range = 3;0-6;11, $SD = 9.04$ months) judges two constructions: root finite verbs and wh-questions. Most children's scores were higher for finiteness than for inversion (33 of 46 - 72%). A paired comparison of children's finiteness and inversion scores showed finiteness to be significantly better (paired t-test, $t[45] = -2.788$, $p = .008$, two-tailed), consistent with independent verb movement to IP as a prerequisite for movement to CP. Strengthening this claim is the fact that children's finiteness and inversion scores were highly correlated (Pearson correlation = .565, $p < .000$).

Notes

POSTER SESSION II

An acoustic analysis of child language productions with reduced clusters

Margarita Gulian, Leiden University

Cluster reduction is a common phenomenon in the word productions of young children, i.e. [si:p] for *sleep*. The question is where the cluster reduction originates in the speech production mechanism: either in the lexical representation, during syllabification or during phonetic encoding. For this purpose we look at two types of reduced clusters in Dutch toddlers' production data, namely the reduced C2 in *brood* vs. *knippen*. We show that the omitted consonant of the /r/-clusters leaves an acoustic trace, indicating that the most likely source of the omission in these cluster types is the phonetic representation. On the other hand, /n/-clusters are reduced without leaving a trace. We argue that in this case the lexical representation might be the source for the omission. The difference between /r/- and /n/-clusters can be explained with the sonority distance between the first and the second consonants in the two clusters.

POSTER SESSION II

Specific Language Impairment (SLI) in sign language: From deaf signing children

*Rosalind Herman, Chloe Marshall, Kathryn Mason, Kate Rowley, Gary Morgan, City University, London
Bencie Woll, University College, London*

7-10% of hearing children have SLI. Exclusion criteria are impaired cognitive skills, inadequate social environment and hearing loss, thereby excluding Deaf children who sign. This study is the first of its kind to document SLI in deaf signers, challenging theories of SLI based on an auditory processing deficit. We present case studies from a cohort of 45 Deaf children (7-14 years) with early exposure to British Sign Language, normal cognitive development and without social or motor difficulties. Test data comprise standardised measures of sign grammar, a norm-referenced nonsense-sign repetition test, a sentence repetition test and a vocabulary test. These children use gesture and facial expression appropriately in conversation, yet find complex language structures (spatial verbs, classifier handshapes) problematic compared with typically developing peers.

Notes

POSTER SESSION II

Language performance in 6- and 9-month-old infants with very low birth weight

Birgit Herold and Barbara Hoehle, University of Potsdam

We report the results of two experiments investigating if prematurity affects the processing of prosodic information and the acquisition of the prosodic features of the ambient language. Preterm birth and an associated lack of exposure to prosodic information are suspected to impair language acquisition in preterm infants. Thirty healthy monolingual German VLBW infants were tested and compared to 30 term infants using the headturn preference paradigm. Preterm infants showed no preference for the native trochaic stress pattern at the corrected age of 6 months and failed to segment trochaic words from a continuous speech stream at 9 months. In term infants, the listening time was longer towards the trochaic than to the iambic stress patterns ($p < 0.001$ and $p < 0.001$, at 6 and 9 months). There were no developmental differences between the two groups in the 6-months BSID II (MDI: $p = 0.71$; PDI: $p = 0.11$).

POSTER SESSION II

Age constraints on the acquisition of
second language prosody

Becky H. Huang and Sun-Ah Jun, University College London

The current study reports an exploratory analysis of the age effect on the acquisition of L2 prosody. Participants included three groups of Chinese L2 learners of English with varying age of arrival in the U.S. and ten English native speakers as control subjects. The prosodic grouping and intonation pattern of the recorded speech was analyzed based on the American English Tones and Break Indices prosodic transcription conventions (Beckman & Hirschberg 1994, Beckman & Ayers-Elam 1994), and the speech rate was calculated based on the acoustic measurement. The speech files were also low-pass filtered and played to English native speakers to rate the degree of foreign prosody. The current findings suggest that the acquisition of L2 prosody is significantly influenced by the age of arrival factor, but the age constraints are gradual and the strength of constraints vary among different aspects of prosody

POSTER SESSION II

The acquisition of case markers in Korean 3-year-olds

*Kyong-sun Jin and Hyun-joo Song
Yonsei University*

Language has various devices to convey sentence meaning. In English, word order is one of the reliable cues to sentence meaning. However, languages like Korean, Turkish, and Japanese have relatively flexible word order and typically have case markers which indicate the grammatical roles of noun phrases. The current study examined whether Korean 3-year-olds can use case markers when understanding sentences. Children heard either canonical word order (Subject-Object-Verb) sentences or noncanonical word order (Object-Subject-Verb) sentences, while watching side-by-side videos about a bunny and a bear. In one video, the bunny acted on the bear; in the other, the characters' roles were reversed. The children were asked to choose which video matched the sentence they heard. The children correctly understood both canonical and noncanonical word order sentences relying on case markers. These results suggest that at least by 3 years of age, Korean children have some knowledge of case marking system in Korean.

POSTER SESSION II

Gradient phonotactic constraints for speech segmentation in a
second language

*Rene Kager and Natalie Boll-Avetisyan, Utrecht University
Ao Chen, Leiden University*

Advanced L2 learners can acquire consonant cluster phonotactics of the target language for speech segmentation (Weber, 2003). Here we raise the issue of whether L2 learners are also able to acquire gradient constraints involving nonadjacent consonants. In the Dutch lexicon, pairs of labial consonants across vowels are underrepresented, reflecting an OCP Place constraint (Kager & Shatzman 2007). Mandarin Chinese displays no such restriction. To examine whether OCP facilitates segmentation, we conducted artificial language experiments with Dutch native listeners and Chinese L2 learners of Dutch. Natives preferred segmentations that satisfy OCP over segmentations that violate it. Beginning L2 learners showed no such preference. Two groups of advanced L2 learners were tested: those who had learned Dutch in the Netherlands matched the natives, whereas those trained in China did not. Our results suggest that advanced L2 learners can acquire gradient, nonadjacent dependencies, but that prolonged exposure to native spoken language input is essential.

Notes

Abstract rule learning in typically developing and G-SLI adolescents: An ERP study

Elena Kushnarenko, University College London
Ansgar Endress and Andrew Nevins, Harvard University
Outi Tuomainen, University College London
Marc Hauser, Harvard University
Heather van der Lely, University College London

We employed event-related brain potentials (ERPs) to explore the acquisition of an artificial grammar in both typical and atypical language developing children and adults. The atypical language group is composed of children previously found to have a selective impairment in language-specific brain responses to syntactic violations (so called Grammatical(G)-SLI). Triplets of syllables followed either the ABA or ABB structure. Each structure was presented as legal in separate blocks with the alternative structure, presented infrequently and serving as illegal target stimuli in an attended oddball paradigm. The overall methodology ensured that subjects had to form an abstract representation of the rule. The results revealed a significant decrease in ERP amplitudes over parietal and frontocentral regions in G-SLI subjects. We discuss the possible functional interpretation of our findings with respect to difficulties in constructing speaker-independent phonological representations and abstract rule learning and its role in typical and atypical grammatical acquisition.

POSTER SESSION II

Erika Marchetto and Luca L. Bonatti
International School For Advanced Studies, Via Beirut

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POSTER SESSION II

Recognition of bound morphemes in preverbal infants

Alexandra Marquis and Rushen Shi
University of Quebec - Montreal

In Québec-French, high vowels are lax before a stop or fricative coda, and tense elsewhere. CVC verbs including high vowels exhibit this alternation when conjugated (and resyllabified) with a vowel-initial suffix. Can infants recognize roots despite such alternations (e.g., [kUt]-[kute])? In Experiment 1, French-learning 11-month-olds were familiarized with a CVC nonsense verb root, [trId] or [glYt]. All infants were tested with sentences containing the verb roots in conjugated forms, [tride] versus [glyte]. They listened longer to those sentences containing the conjugated forms of the familiarized roots. Experiment 2 tested if the root recognition was related to the /e/ suffix. Familiarization was the same as in Experiment 1. Test sentences, however, contained non-suffixed disyllabic forms ([tridu] versus [glytu]). Infants showed no listening difference, confirming that the suffix in Experiment 1 was important for root recognition. We conclude that preverbal infants can recognize verb roots in conjugated forms and can process the associated phonological vowel alternations.

POSTER SESSION II

Language outcome in benign Rolandic Epilepsy of childhood with centro-temporal spikes: Syntactic complexity deficit

Cecile Monjauze, University College London
Laurice Tuller, University Francois-Rabelais of Tours

Whether BECTS has a transient or permanent effect on language development is still controversial. Thus, we report here on a follow-up study of a subgroup of a previously studied cohort, including 18 BECTS participants aged 11 to 18, who underwent an experimental probe eliciting accusative clitic pronouns and a spontaneous language sample analysis, using measures of syntactic complexity and analysis of morphosyntactic errors. The BECTS group produced fewer accusative clitics than the controls (81.9% vs 96.4%) and used significantly fewer complex sentences (relative clauses: 22.7% vs 30.9% of all verbal utterances). Moreover, they produced significantly more erroneous complex utterances (9.8% vs 1.6%). Participants in remission did not differ significantly from participants in active phase. These results suggest that epileptic activity is likely to lead to linguistic sequelae in this so-called benign epilepsy, characterized by the avoidance of complex syntactic structures and the production of morphosyntactic errors in complex syntactic contexts.

POSTER SESSION II

Root infinitives in Japanese and the late acquisition of head movement

Keiko Murasugi and Chisato Fuji
Nanzan University, Japan

Root Infinitives (RIs) are the "default" forms which children, at around two, use in root clauses. Murasugi, Fuji and Hashimoto (2007), at Asian GLOW 2007, discuss that there is a RI-stage in Japanese (contra Sano 1995 and Kato et al. 2003), though RIs have not a specific infinitival form: Japanese RIs have past-tensed verb forms, "V-ta". Like other languages, I-related (finite-be and Nominative-Case-marker) and C-related (Complementizer and wh-phrases) elements are not found then, and the "V-ta" could denote irrealis meaning. Based on the detailed analysis of Sumihare database (Noji 1974-1977), this paper provides supportive evidence for this finding, arguing that RIs in Japanese, an agglutinative language, show peculiar characteristics with respect to the age, optionality, and Case-marking at the stage. Our analysis provides evidence for Phillips' (1996) analysis that RIs are produced because of children's deficit of syntactic representation. The multiple head-movement inside TP projection is acquired step by step.

Notes

POSTER SESSION II

The syntactic deficit in SLI:
When an argument crosses a similar one

*Rama Novogrodsky and Naama Friedmann
Tel Aviv University*

Children with SLI show deficits in the comprehension and production of sentences derived by syntactic movement. This study tested the comprehension and production of 20 school-age Hebrew-speaking children with syntactic-SLI, and 20 children with typical language. The participants with SLI showed a considerable difficulty in the comprehension of (reversible) sentences derived by Wh-movement, along with good comprehension of sentences without Wh-movement; sentences in which an argument crossed another argument were impaired (object relatives, object questions, topicalization), whereas sentences without such crossing were comprehended better (subject-relatives, subject-questions); sentences in which both the moved element and the crossed argument were referential (object which- questions) were harder than sentences in which the moved element was non-referential (object who-questions). The patterns of production and repetition are consistent with these patterns. We thus suggest that the syntactic deficit in syntactic-SLI relates to the assignment of thematic roles to an element that underwent Wh-movement over another similar argument.

Notes

POSTER SESSION II

Word recognition in German primary school children with English as a second language: Evidence for positive transfer?

Antje Pillunat and Dany Adone, University of Cologne

The current study examines reading proficiency in the L2 English of German primary school children at the age of nine years. The main goal of the study is to show whether children with a transparent orthography in their L1 have an advantage when learning to read and write the deep English orthography. It has been argued that positive transfer takes place in L2 English, especially when the L1 orthography is transparent (Siegel 2004). Each child performs three reading tasks in both German and English: 1. single paragraph reading, 2. single word reading and 3. single pseudoword reading. Reading times (task 1) and reaction times (task 2+3) are measured, experimental sessions are subsequently analyzed for fluency (task 1) and accuracy. Overall this study seems to support the view that positive transfer from L1 German to L2 English takes place in terms of facilitation of word recognition.

POSTER SESSION II

The acquisition of subject expression
in early Catalan-Spanish bilinguals: A case of convergence

Ana de Prada Perez, Pennsylvania State University

Researchers have reported an overuse of overt pronominal subjects in Spanish in contact with English, an outcome predicted by two competing views: simplification (Sorace 2004) vs. convergence (Bullock and Toribio 2004). The former states that, in contact situations, a simpler form emerges; while the latter argues for an outcome that bridges between the two languages. However, these approaches make distinct predictions for cases of contact between two null subject languages. Relevant research has returned contradictory results. This paper, thus, explores Spanish in contact with Catalan, in a situation of stable bilingualism, Minorca, Spain. Naturalistic data from 42 participants, 14 Catalan L1 and 14 Spanish L1 speakers in Minorca, in addition to 14 monolingual speakers in Valladolid, was extracted from sociolinguistic interviews (approx. 45 hours). Results support the convergence view. In addition, a more in-depth analysis investigating the pragmatic use of subjects discloses that minor differences obtain between the groups.

Katrin Skoruppa and Sharon Peperkamp
Laboratoire de Sciences Cognitives et Psycholinguistique,
France

POSTER SESSION II

Mahesh Srinivasan and Jesse Snedeker
Harvard University

Notes

[illegible]

The interaction of discourse function and input frequency
in L1 acquisition: The case of *was... für* 'what kind of...'
questions in German

Rasmus Steinkrauss, University of Groningen

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POSTER SESSION II

Discriminating linguistic analyses with child data:
The case of N-drop in French

Daniel Valois, Phaedra Royle, and Nicolas Bourguignon
University of Montreal

The goal of this paper is to show how child language data can help discriminate between competing analyses of the same morpho-syntactic phenomenon. Examination of two spoken French corpora, one cross-sectional (CS: 11 children aged 1;8-2;12), and one longitudinal (L: Pauline, aged 1;2:20 – 2;6:13, in CHILDES,) leads to the conclusion that agreement is not at the source of noun ellipsis in French, e.g. Je veux le bleu 'I want the blue (one)', (corroborating results from Snyder et al. (2001) for Spanish, and Ntelitheos and Christodoulou 2005 for Greek), and that the presence and nature of the determiner plays a central role in this process. This supports Bouchard's (2002) analysis of French and English N-Drop in which atomization of the denomination of a noun, which is accomplished through the determiner in French, is the key factor licensing N-drop.

Notes

POSTER SESSION II

Morphological cues vs. number of nominals in learning
verb types from child directed speech

Deniz Yüret and A. Engin Ural, Koc University
Nihan Ketrez, Yale University
Dilara Koçbaş and Aylin C. Küntay, Koc University

The syntactic bootstrapping mechanism of verb classification was evaluated against child-directed speech in Turkish, a language with rich morphology, nominal ellipsis and free word order. Machine-learning algorithms were run on transcribed caregiver speech (12,276 and 20,687 utterances) directed to two Turkish learners (one hour every two weeks between 0;9 to 1;10) of different socioeconomic backgrounds. The corpora contained 12,276 and 20,687 child-directed utterances. Study 1 found that the number of nominals in child-directed utterances plays some role in classifying transitive and intransitive verbs. Study 2 found that accusative morphology on the noun is a stronger cue in clustering verb types. Study 3 found that verbal morphology is useful in distinguishing between different subtypes of intransitive verbs. These results suggest that syntactic bootstrapping mechanisms should be extended to include morphological cues to verb learning in morphologically rich languages.

Notes

Session A--Metcalf Small

Mutual exclusivity in autism spectrum disorders:
Testing the pragmatic hypothesis

Ashley de Marchena, University of Connecticut, Storrs
Amanda Worek and Kim Ono, Harvard University
Inge-Marie Eigsti, University of Connecticut, Storrs
Jesse Snedeker, Harvard University

While there is ample evidence that children treat words as mutually exclusive, the cognitive basis of this bias is widely debated. Is it a domain-specific constraint on lexical learning, a pragmatic skill reflecting broader communicative competence, or a domain-general preference for one-to-one mappings? High-functioning children with autism spectrum disorders (ASD) offer a unique perspective on this debate, as they acquire average or above-average vocabularies despite impoverished social-pragmatic skills. We tested children and adolescents with ASD in a paradigm examining mutual exclusivity for words and for facts. Words were interpreted contrastively more often than facts. Word performance was associated with vocabulary scores, while fact performance was associated with symptom severity. We conclude that while social-pragmatic skills underpin the inference that facts are used contrastively, the contrastive use of words has a distinct cognitive basis. These findings are consistent with the linguistic account of mutual exclusivity but not the pragmatic account.

Session B--East Balcony

On vs above: Lexical semantics and syntactic factors affecting
spatial acquisition

Arhonto Terzi, Technological Educational Institute of Patras
Vina Tsakali, University of Crete

We studied (complex) locative Ps of 69 Greek speaking children, aged 2-6, 8 age groups. Paradoxically, production showed that the three older groups use both *epano apo* 'above' and *epano se* 'on' correctly, while in the comprehension task they performed correctly on the former but at chance on the latter. We explain this mismatch as follows: *epano* is lexical, modifying Place (Terzi 2005), *apo* is semi-lexical (van Riemsdijk 1990, 1998), carrying the meaning of Path/source (or distance), *se* is functional, checking the Case of the ground argument (Botwinik-Rotem & Terzi 2008). Acquisition of *epano* is thus expected to precede acquisition of *apo* and *apo* to precede acquisition of *se* (confirmed by Alexaki et al. 2007). The correct production data do not reveal children's (incomplete) knowledge of the spatial on, but their knowledge of Case requirements. Comprehension shows that children understand better spatial notions with exclusively lexically conveyed meaning, i.e., above.

Notes

Session C--Conference Auditorium

ERP correlates of syntactic focus structure processing:
From L1 and L2 French

Robert Reichle, University of Texas - Austin

This study examined the event-related potentials (ERPs) indexed with the processing of syntactic focus structure anomalies in L1 and L2 speakers of French and found that they are, for L1 subjects, similar to those seen for prosodic anomalies. Subjects were visually presented with questions in French, followed by responses containing felicitous or infelicitous focus structures. N400 and P600 effects were seen in L1 subjects for the infelicitous condition, which agrees with results for prosodic mismatch and focus structure revision from previous studies (Hruska & Alter, 2004). In low-proficiency L2 subjects, the same stimuli elicited a widely distributed positivity from 400-800 ms, which was interpreted as a P3b component similar to the one seen by Magne et al. (2005). In high-proficiency L2 subjects there was marginal evidence of an N400 followed by a P600, suggesting that an increase in proficiency leads to processing signatures more similar to those of L1 subjects.

Session A--Metcalf Small

Modeling early word learning through inference about speakers' referential intentions

*Michael Frank, Noah D. Goodman and Joshua B. Tenenbaum
Massachusetts Institute of Technology*

Word learners face a difficult chicken-and-egg problem: they must infer the meanings of individual words at the same time as they try to interpret speakers and utterances as a whole. We propose a Bayesian computational model that provides an analysis of this cross-situational learning problem for the domain of object labels. Our model incorporates an explicit representation of speakers and referential intentions that mediates the mappings between the words speakers utter and the objects that are present at the time of an utterance. When trained on a small corpus, the Bayesian model learns a more accurate vocabulary than comparison models. The model fits a wide range of empirical data, including experiments on mutual exclusivity, fast mapping, and object individuation, and can be extended to incorporate social, pragmatic and discourse cues to reference. These results suggest that explicit representations of referential intention can provide a unifying framework for early word learning.

Session B--East Balcony

Cross-linguistic biases in the semantics and acquisition of spatial language

*Megan Johanson, University of Delaware
Stathis Selimis, University of Athens
Anna Papafragou, University of Delaware*

We explore an overextension pattern discovered in spatial language. In a first study, English-speaking 4- and 5-year-olds and adults described motion events with a variety of paths (e.g., INTO, BEHIND, TOWARD, etc.). Containment terms (e.g., in/into) were produced consistently for INTO events by all age groups ($M4s=.97$, $M5y=.93$, $Mad=.97$). However, 4-year-olds overextended these terms to encode motion events where the Figure ended up BEHIND or UNDER the Ground ($M=.40$ and $.37$). A second study replicated this finding with young Greek-speakers, a language in which verbs rather than adpositions often encode Path information. A third study showed that overextension of containment terms is robust cross-linguistically (e.g., it occurs in Spanish, Dhivehi, Turkish, Cantonese, and Swahili). We propose a concept of 'virtual containment' that differs from physical containment and can be exploited for linguistic purposes. This more abstract notion of containment structures both the semantics and the acquisition of spatial language.

Session C--Conference Auditorium

Snapshots of grammaticalization:
Differential electrophysiological responses to grammatical anomalies with increasing L2 exposure

*Darren Tanner, Lee Osterhout and Julia Herschensohn
University of Washington*

As opposed to off-line behavioral tasks, ERPs are sensitive to differences between processing of lexical and syntactic anomalies, which reliably elicit N400 and P600 ERP components, respectively. This makes them ideal for studying qualitative differences in processing associated with different levels of L2 proficiency and exposure. Using a cross-sectional design, this study therefore uses ERPs to investigate morphosyntactic processing in low- and intermediate-proficiency L2 German learners. Results show that subject-verb agreement violations elicited the expected P600 in native speakers and third year classroom-instructed learners. First year learners showed qualitatively different results: while high-performing first year students (measured by sensitivity to grammatical anomalies) showed a P600, low-performing subjects showed an N400 effect. This indicates that L2ers may initially represent inflected verbs as unanalyzed units and therefore process agreement errors as lexical anomalies, only later inducing a syntactic rule. These results corroborate previous longitudinal findings of morphosyntactic processing in L2 French.

Notes

Session A--Metcalf Small

Cross-situational learning in realistic learning environments:
Evidence for epiphanies

*Tamara Nicol Medina, John Trueswell, and Lila Gleitman:
University of Pennsylvania*

We suggest that successful cross-situational word learning observed in previous experiments (e.g., Xu & Tenenbaum, 2007; Yu & Smith, 2007) may be the product of highly constrained learning instances in which referents are prominently displayed and always labeled. In two experiments using parent-child interactions as learning instances, we show that word learning occurs via single, highly informative exposures. Adults learned nouns by watching a series of muted video vignettes, which either had high (potential "Epiphanies") or low ("Typical") baseline success in a separate study. Presence and position of a single Epiphany vignette was manipulated relative to four Typical vignettes; the Epiphany occurred either first, middle, last or never. We found that accuracy depended on the position of Epiphanies; when Epiphanies occurred first, accuracy was high and successful performance persisted across all remaining Typical vignettes. Accuracy decreased as Epiphany vignettes were presented later.

Session B--East Balcony

Expanding locative case marking beyond spatial contexts in
child Hungarian

*Ashley Fidler, Georgetown University
Anna Babarczy,
Budapest University of Technology and Economics*

The present study investigates the production of locative case markers by Hungarian-speaking preschool children in two contexts: abstract (e.g., ON Saturday) and concrete (e.g., ON the table). Specifically, we asked whether the presence of an abstract context would result in less accurate case marking in preschool-aged children. Using an eleven-picture wordless story, we elicited concrete and abstract uses of the nine Hungarian locative case markers from 50 typically-developing 3- to 7-year-old children and adult controls. The results of this study suggest that the presence of abstract language does affect the ability of 3-year-old Hungarian-speaking children to use locative case markers accurately. Between 6 and 7 years of age, furthermore, children reach adult-like performance on this task. This preliminary study suggests a new research direction into the interaction between morphosyntax and abstract language as children move beyond the here-and-now in their speech during the fourth year of life.

Notes

Session C--Conference Auditorium

L2 syntax meets information structure:
Word order at the interfaces

*Cristobal Lozano, Universidad de Granada
Amaya Mendikoetxea, Universidad Autónoma de Madrid*

The aim of this presentation is to show that both English learners of Romance and Romance learners of English are sensitive to L2 discourse status (focus) in subject inversion constructions (VS), but they show residual yet persistent problems when encoding information status syntactically. Both our experimental and corpus data support the claim that deficits at the syntax-discourse interface are syntactic in nature. Additionally, an important conclusion of our work is that (i) unaccusativity is a necessary but not a sufficient condition for the acceptability and/or the production of Verb Subject structures in non-native grammars and that (ii) properties at both the syntax-discourse and syntax-phonology interfaces, which have been shown to be relevant for a variety of word order phenomena in native English, also play a crucial role in L2 constituent ordering.

Session A--Metcalf Small

Specificity of meaning predicts verb acquisition in English and Mandarin Chinese

Rachel Pulverman, University of Michigan
Kristin Rohrbeck, University of Michigan
Ping Chen, Peking University
Amanda Ulrich, University of Michigan

Although learning verbs seems to be difficult for young children in many languages, including English, in some languages (e.g., Mandarin) verbs are learned as readily as object nouns. How do the meanings of particular verbs affect toddlers' ability to learn them? Adult native speakers of English (in the U.S.) and Mandarin (in China) rated the verbs from the MacArthur-Bates Communicative Development Inventories (CDI's) from 1 (not at all specific) to 6 (very specific) on six dimensions of meaning: overall specificity, and specificity of path, manner, result, objects/actors involved, and intentionality. Results indicate that Mandarin verbs are more specific on four of the six dimensions, including overall specificity. Furthermore, significant correlations between adults' specificity ratings and toddler acquisition measures from the CDI norming data show that more specific verbs, both within and across languages, tend to be easier for toddlers to learn. Together, these findings suggest that part of the reason that verbs are learned more readily in Mandarin than in English may be that Mandarin has a preponderance of easy verbs.

Session B--East Balcony

Semantic factors in young children's comprehension and production of passives

Katherine Messenger, Holly Branigan, Aantonella Sorace, and Janet McLean, Edinburgh University

English-speaking children's comprehension of the passive appears semantically constrained: 4-5-year-olds comprehend agent-patient actional passives better than experiencer-theme non-actional passives (Maratsos et al, 1985). These results might reflect children's difficulty interpreting non-actional event pictures, or they might have genuine difficulties interpreting such sentences. We present two experiments investigating this: Experiment 1 tested children's comprehension of agent-patient, experiencer-theme and theme-experiencer verb active and passives in a sentence-picture-matching task. We found a significant effect of structure ($p < .001$) and verb-type ($p < .001$): Children understood actives better than passives and actional and theme-experiencer passives better than experiencer-theme passives. Experiment 2 tested the same factors using structural priming (Bock, 1986). We found a reliable effect of structure ($p < .01$) but not verb-type ($F < 2$): Children were more likely to produce a passive description after hearing a passive prime than an active, irrespective of the prime-verb. Our priming results suggest task effects may confound the semantic effects in sentence-picture-matching experiments.

Session C--Conference Auditorium

Frequency and features in first language phonology

Marc van Oostendorp, Meertens Institute
Clara Levelt, Leiden University

Several accounts have been presented for the L1 acquisition of a sound inventory. Based on longitudinal data from 6 children acquiring Dutch as their first language, we argue for a revised Jakobsonian account. The sound inventory is acquired in terms of features, rather than segments. However, in our model the acquisition of features goes hand in hand with the emergence of Feature Cooccurrence Constraints (FCCs) in the grammar. We present a restricted theory of these FCCs. Two types of developing inventories feature in our analysis: inventories of sounds in the individual children's productions, and inventories of the sounds that are targeted. While the developmental orders in these individual sets of inventories vary considerably, we show that they all fit our restricted model. Input frequency does play a role in the order of acquisition, but at the level of features rather than segments.

Notes

Session A--Metcalf Small

On the semantic properties of implicit objects in young children's elicited production

Ana T. Perez-Leroux, University of Toronto
Mihaela Pirvulescu, University of Toronto - Mississauga
Yves Roberge, University of Toronto

If verb meanings are acquired on the basis of their contexts (by syntactic bootstrapping from their complementation patterns), how is the meaning of implicit direct objects acquired? Crucially, objects as in (1) cannot link to anaphoric (≠'ate it'), subtype (≠'ate fish'), or atypical (≠'ate a pencil') referents.

- (1) a. Mary ate ? well. ? 'ate something edible' or 'had a meal'
 b. ?x, (x is edible & 'typical'), eat (Mary, x)

We propose that once verb meanings are initially mapped, verbs automatically project a null direct object, semantically selected by the V-root.

- (2) [V V N] (N=null cognate object)

S-SELECTION

With increased knowledge of verb meanings and of the licensing conditions for identification of null objects, children eventually establish the potential meanings of N. To test this proposal, we elicited descriptions of events with typical and atypical objects (eat a sandwich/a book) in 28 English-speaking children. All groups produced more null objects in typical than in atypical scenarios; but children produced five times as much null objects in atypical scenarios than adults.

Session B--East Balceny

Sesotho passives: The long and short of it

Jean Crawford, University of Connecticut - Storrs

The Maturation Hypothesis (MH) predicts cross-linguistic delay in the acquisition of verbal passives (Borer and Wexler 1987). Demuth (1989) argues against MH, finding early passive use in Sesotho. This paper adds experimental results to the debate. 11 Sesotho-speaking children (5;0-6;0) and 10 adults took a Sesotho version of the two-choice picture-selection task. Four actional verbs were tested. ANOVAs crossing voice (actives/long passives) with age show a main effect (ME) of voice, ME of age, and interaction of voice and age. Comparing actives to short passives, there is a ME of voice, but no interaction between age and voice. ANOVAs crossing length and age reveal long passives were disproportionately difficult. These data suggest Sesotho children comprehend short actional passives, but not long actional passives. I argue the poor performance on long actional passives is due to their being unambiguously verbal, while adult-like performance on short passives is due to differing agreement morphology.

Notes

Session C--Conference Auditorium

Weighted constraints and faithfulness cumulativity in phonological acquisition

Ashely Farris-Trimble, Indiana University

This paper explores the issue of how a child chooses between multiple unfaithful productions that are equally unmarked. For example, Amahl (Smith, 1973) exhibits processes of fricative stopping and final devoicing, but he deletes a target word-final voiced fricative rather than combining the stopping and devoicing processes. The question asked here is why stopping and devoicing do not combine to repair the final voiced fricative; alternatively, if deletion is a viable repair strategy, why are voiceless fricatives and final voiced stops not deleted? This paper argues that children distinguish between degrees of unfaithfulness. When there are multiple unmarked options, the most faithful repair is chosen. Cumulative unfaithful mappings can be enough to eliminate a possible production even when single unfaithful mappings are allowed. Constraint-based accounts of Amahl and of two other children with similar cumulative interactions are provided, focusing on harmonic grammar, a theory that allows for cumulative effects. (Supported by NIH-DC00012 & DC001694.)

Session A--Metcalf Small

Syntactic generalization with novel intransitive verbs:
Who is pilking?

*Melissa Kline and Katherine Demuth
Brown University*

The question of when young children gain access to syntactic knowledge has been hotly debated (c.f. Tomasello (2000), Fisher (2002)). The present studies address this issue by investigating 2;6-year-olds' knowledge of transitive/intransitive verb alternations, using a novel verb learning task. This work provides the first direct comparison of 2;6-year-olds' ability to produce creative generalizations with the two types of English intransitive verb (patient intransitives - 'Kim drops the box'/'The box drops' - and agent intransitives - 'Kim paints the box'/'Kim paints'). Children showed knowledge of both these alternations: the majority made creative generalizations with the novel verbs. Furthermore, some children generated semantically appropriate agent intransitives even when discourse pressure favored patient intransitives, indicating that they had stronger command of the transitive/agent intransitive alternation. This bias was in line with frequency distributions in adults' speech to children. These findings provide additional support for children's early access to syntactic knowledge.

Session B--East Balcony

From group results to individual patterns
in pronoun comprehension

*Jacolien van Rij-Tange, Petra Hendriks, Jennifer Spenader,
and Hedderik van Rijn, University of Groningen*

In this study the effects of slowed-down speech on pronoun comprehension have been investigated. Up to the age of 6, children have been shown to experience difficulties in the interpretation of pronouns (but not reflexives) by incorrectly allowing the pronoun to corefer with the local subject about half the time (e.g., Chien & Wexler, 1990). Previous research (Hendriks, Van Rijn & Valkenier, 2007) predicts that this Delay of Principle B effect (DPBE) will decrease if children are given more time for interpretation. To address this hypothesis, 62 children (age 4;1-6;2, mean 5;1) were tested on a comprehension task in two speech rate conditions (normal, 4.0 syll/sec versus slow speech rate, 2.7 syll/sec). It was found that slowed-down speech has a significant beneficial effect on children's pronoun comprehension, but only if the child displays a DPBE. This supports the hypothesis that the DPBE is caused by children's insufficient speed of processing.

Session C--Conference Auditorium

Acquisition of liaison and sensitivity to plural/singular orientation of nouns : A test case for a central hypothesis of the usage-based theory of language development

*Jean-Piere Chevrot, University of Lyon
Celine Dugua, Université d'Orléans, France
Elsa Spinelli, University Pierre Mendès France - Grenoble*

This study tests a central hypothesis of the usage-based theory of language acquisition: the simultaneous presence of exemplars and productive schemata in the lexicon. We use the acquisition of French liaison as a test case. We investigate whether the production and the recognition of determiner-noun sequences including liaisons depend on the statistical number orientation of the noun (from 3;3 to 6;3). The results suggest that the older children have generalized schemata preventing them from producing number-oriented liaison errors, but at the same age, certain stored determiner-noun sequences remain available in the lexicon and influence the perception task.

Notes

Session A--Metcalf Small

Linguistic information supports 3-year-olds' identification of verbs (and nouns): New evidence from a modified Human Simulation Paradigm

*Sandra Waxman, Northwestern University
Louisa Plotkin, Trinity College*

Verbs may be acquired relatively late because their meaning depends on linguistic information that is not available to young word-learners. Evidence for this position comes from 7-year-olds and adults (Gillette et al., 1999; Piccin & Waxman, 2007). But how do these findings bear on early word learning? We modified the HSP to accommodate 3-year-olds, presenting brief segments from Sesame Street. Children were randomly assigned to either a 'no linguistic information' (-LI) or 'full linguistic information' (+LI) condition. In the +LI condition, children heard the dialog from the audiobook, with the target word (e.g., 'head') replaced with a novel 'mystery' word (e.g., 'blick'). In the -LI condition, the audiobook was removed; the 'mystery' word alone was presented. Three-year-olds were more successful identifying nouns than verbs, and more successful in the +LI than -LI condition. Although verb-meaning depends upon linguistic information, 3-year-olds successfully recruit linguistic information when it is provided.

Session B--East Balcony

Filler-gap dependencies in 15- and 20-month olds

*Ann Gagliardi and Jeffrey Lidz
University of Maryland - College Park*

The study of filler-gap dependencies has held a central position in syntactic theory and models of sentence processing, due to their unbounded character and the demands this unboundedness places on on-line sentence understanding. While much work has examined the acquisition of wh-questions and relativization, very little work has asked whether the patterns of acquisition for these dependencies are parallel, as research in syntactic theory would predict. Earlier work has found that subject wh-questions are understood by both 15- and 20-month-old infants, and that object wh-questions are understood only by 20-month-olds. We demonstrate, however, that both 15- and 20-month old infants can understand wh-movement and relativization involving both subjects and objects. Moreover, we show that differences in reaction times between the two ages are found in both wh-questions and relativization, implicating a common processing mechanism for these dependencies.

Notes

Session C--Conference Auditorium

Phonological development in late talkers

*Marilyn Vihman and Tamar Keren-Portnoy, University of York
Rory DePaolis, James Madison University
Ghada Khattab, Northwestern University
Susi Schiemenz, University of Wales - Bangor*

This study compares phonological systematicity toward the end of the single word period in 11 Typically Developing children (TDs) and 11 (expressive) Late Talkers (LTs) to test the hypothesis that a lack of early phonological systematicity will predict later grammatical deficits. A 'bottom up' procedure is used which correlates word form similarity and distance from adult target to estimate systematicity. The LTs fall into two groups as regards both systematicity and labial use, which is higher in the TDs but bipolar for the LTs, with the children with the least systematic phonology making low use of labials. The low systematicity coupled with the failure to make use of the visual cue to word formation provided by labials suggests a deficit in pattern induction and procedural learning such as has been posited for children with SLI, suggesting that LT phonology may provide a critical early indicator of persistent delay.

Alternates

The role of categorical proximity for referent identification in a preferential looking task

Natalia Arias-Trejo, University of Oxford

How does the categorical relationship and perceptual similarity between two objects influence early referent identification? Twelve to twenty-four-month-old infants were presented with two objects in a preferential looking task in one of two conditions: target-distracter taken from the SAME or from DIFFERENT superordinate categories. In Experiment 1, infants in all age groups were successful at identifying the named target in the SAME condition. However, only the 21-month-olds succeeded in identifying the named target in the DIFFERENT condition. In Experiment 2, controlling for perceptual similarity benefited infants when target and distracter were perceptually dissimilar and taken from different superordinate categories. Moreover, 21- and 24-month-olds also benefited from perceptual dissimilarity when the target-distracter pairs were category coordinates. At all ages, infants failed to identify targets paired with perceptually similar category coordinates. These findings suggest that category membership and perceptual similarity play different roles in the early stages of lexical development.

Alternates

The acquisition of subject expression in early Catalan-Spanish bilinguals: A case of convergence

Ana de Prada Perez, Pennsylvania State University

Researchers have reported an overuse of overt pronominal subjects in Spanish in contact with English, an outcome predicted by two competing views: simplification (Sorace 2004) vs. convergence (Bullock and Toribio 2004). The former states that, in contact situations, a simpler form emerges; while the latter argues for an outcome that bridges between the two languages. However, these approaches make distinct predictions for cases of contact between two null subject languages. Relevant research has returned contradictory results. This paper, thus, explores Spanish in contact with Catalan, in a situation of stable bilingualism, Minorca, Spain. Naturalistic data from 42 participants, 14 Catalan L1 and 14 Spanish L1 speakers in Minorca, in addition to 14 monolingual speakers in Valladolid, was extracted from sociolinguistic interviews (approx. 45 hours). Results support the convergence view. In addition, a more in-depth analysis investigating the pragmatic use of subjects discloses that minor differences obtain between the groups.

Alternates

Finiteness, subject-aux inversion and the head movement constraint in child English

*John Grinstead, Valissa Warren, Cara Ricci,
and Sarah Sanderson,
Ohio State University*

V-to-I-to-C movement is investigated in child English speakers. Our hypothesis is that children should mark verbs as finite to a greater or equal extent than they invert subjects and verbs. We measure these abilities using paired grammaticality judgment tasks. In experiments 1 and 2, a group of child English-speakers ($n = 63$, mean age = 4;10, range = 3;0-6;11, $SD = 9.04$ months) judges two constructions: root finite verbs and wh-questions. Most children's scores were higher for finiteness than for inversion (33 of 46 - 72%). A paired comparison of children's finiteness and inversion scores showed finiteness to be significantly better (paired t-test, $t[45] = -2.788$, $p = .008$, two-tailed), consistent with independent verb movement to IP as a prerequisite for movement to CP. Strengthening this claim is the fact that children's finiteness and inversion scores were highly correlated (Pearson correlation = .565, $p < .000$).

Notes

Alternates

Native-like attainment of the lexicon-syntax interface in the L2: Evidence from converging methodologies

Tihana Kras, Cambridge University

This paper investigates whether the lexicon-syntax interface, an interface between two domains internal to the language faculty, can be fully acquired in the L2. The phenomenon under scrutiny is auxiliary selection with intransitive verbs in Italian, a syntactic phenomenon determined by aspectual/thematic factors, i.e. telicity and agentivity of the verb/predicate (Sorace 2000). In the paper, we report the findings from an experimental study in which adult near-native speakers of Italian whose native language, Croatian, does not have auxiliary selection, and native Italian speakers performed a self-paced and a speeded version of an acceptability judgement task. The results of the analyses of three types of data (relative acceptability judgements, absolute acceptability judgements, response times) reveal that near-natives have acquired both the syntactic and the lexical-semantic aspect of auxiliary selection with intransitive verbs. Such findings provide support for a hypothesis predicting complete acquisition of the lexicon-syntax interface in the L2.

Notes

Alternates

Segmental and prosodic aspects in the acquisition of Elision in Brazilian Portuguese

Raquel Santos, University of Sao Paulo

This paper discusses how children acquire elision in Brazilian Portuguese, which optionally applies between words and deletes a weak [+back] vowel when followed by a weak vowel or a vowel carrying only word stress. The results show that from 1;3-1;7, children did not apply the rule. From 1;7-3;4, elision started applying in the following contexts: V[+back]#V and V[-back]#V[+back]; and weak#weak, weak#strong, and strong#weak. Elision never occurred between two strong syllables or if the strong syllable carried prominences higher than word stress. Finally, from 3;4 on, the rule was adult-like. These results argue against proposals that elision is an automatic process by showing that children at first do not apply the rule and make mistakes in the course of acquisition. They also show that the properties of the rule are not acquired simultaneously, for children acquired the segmental and the prosodic properties in different periods.

Alternates

On the nature of early lexical representations of polysemous words

Mahesh Srinivasan and Jesse Snedeker, Harvard University

We investigated four-year-olds' representations of words like book, which can refer to physical objects ("red book") and their contents ("interesting book"). Experiment 1 tested knowledge of these meanings. Children saw stories about two characters, each having an object with contrasting physical properties and abstract content. Afterward, they judged an ambiguous statement that depended on their interpretation of a polyseme. Half heard stories where the object interpretation was more salient and half where the content interpretation was. Children succeeded in both cases. Experiment 2 tested knowledge of the relation between senses. Children were taught a novel word corresponding to the polyseme's object-sense. Then they heard the stories, but in the final statement, the novel word replaced the polyseme. Children accepted extensions of novel words to untrained, content-senses. Parallel experiments were run with homophones to show that extension was not phonologically-based. We conclude that four-year-olds have overlapping representations of some polysemous words.

Alternates

Learnability in L2 syntax-semantics: Evidence from German and Italian Learners of L2 Spanish

*Jason Rothman, University of Iowa
Pedro Guijarro-Fuentes, Plymouth Business School
Michael Iverson and Tiffany Judy, University of Iowa*

This study examines the adult L2 acquisition of properties related to the Spanish DP by two sets of intermediate and advanced groups compared against a native Spanish control: L1 German and Italian learners of L2 Spanish. In doing so, we test the predictions of Representational Deficit accounts (RDA) (e.g. Hawkins & Chan 1997; Hawkins & Hattori 2006) against Full Accessibility accounts (FAA) (e.g. Schwartz & Sprouse 1996; White 2003). Experimentally, we investigate L2 knowledge of properties of noun raising as well as related syntax-semantics properties, namely, the available readings for adjectives depending on their position with respect to the head noun. Our results are consistent with recent studies of English learners of L2 French (Anderson 2001, 2007) and L2 Spanish (Judy et al. 2008), all of which support Full Access to UG in adulthood.

Alternates

Discriminating linguistic analyses with child data: The case of N-drop in French

*Daniel Valois, Phaedra Royle and Nicolas Bourguignon
University of Montreal*

The goal of this paper is to show how child language data can help discriminate between competing analyses of the same morpho-syntactic phenomenon. Examination of two spoken French corpora, one cross-sectional (CS: 11 children aged 1;8-2;12), and one longitudinal (L: Pauline, aged 1;2:20 – 2;6:13, in CHILDES,) leads to the conclusion that agreement is not at the source of noun ellipsis in French, e.g. Je veux le bleu 'I want the blue (one)', (corroborating results from Snyder et al. (2001) for Spanish, and Ntelitheos and Christodoulou 2005 for Greek), and that the presence and nature of the determiner plays a central role in this process. This supports Bouchard's (2002) analysis of French and English N-drop in which atomization of the denomination of a noun, which is accomplished through the determiner in French, is the key factor licensing N-drop.

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Authors' Addresses

Linda Abarbanell
Harvard University
lba713@mail.harvard.edu

Dany Adone
University of Cologne
d.adone@uni-koeln.de

Frans Adriaans
Utrecht University
frans.adriaans@let.uu.nl

Ahmet Aktay
Yale University
ahmet.aktay@yale.edu

Jose Alemán-Bañón
University of Kansas
Jose.Aleman.Banon@gmx.net

Ben Ambridge
University of Liverpool
Ben.Ambridge@Liverpool.ac.uk

Stephanie Archer
University of Calgary
slarcher@ucalgary.ca

Natalia Arias-Trejo
University of Oxford
natalia.arias-trejo@psy.ox.ac.uk

Inbal Aron
Stanford University
inbalar@stanford.edu

Sudha Arunachalam
Northwestern University
s-arunachalam@northwestern.edu

Richard Aslin
University of Rochester
richard.aslin@rochester.edu

Terry Au
University of Hong Kong
terryau@hkucc.hku.hk

Anna Babarczy
Budapest University of
Technology and Economics
babarczy@cogsci.bme.hu

Rebecca Baier
University of Maryland at
College Park
rbaier@umd.edu

Colin Bannard
Max Planck Institute for
Evolutionary Anthropology
bannard@eva.mpg.de

Heloiza Barbosa
Federal University of Santa
Catarina
heloiza@hbarbosa.org

David Barner
University of Toronto
david.barner@utoronto.ca

Isabelle Barriere
Yeled v'Ylada Multilingual
Development & Education
Research Institute
isabelle.barriere@gmail.com

Graham Barrington
University of Melbourne
gbarring@bigpond.net.au

Sonja Bartels
University of Potsdam
sonja.bartels@web.de

Michael Becker
University of Massachusetts,
Amherst
michael@linguist.umass.edu

Alyona Belikova
McGill University
alyona.belikova@mail.mcgill.ca

Elika Bergelson
Yeled v'Ylada Multilingual
Development & Education
Research Institute

Ellen Bialystok
York University
ellenb@yorku.ca

Natalie Boll-Avetisyan
Utrecht University
natalie.boll-avetisyan@let.uu.nl

Luca L. Bonatti
International School for
Advanced Studies
Lucabonatti@mac.com

Nicolas Bourguignon
University of Montreal
nicolas.bourguignon@umontreal.ca

Holly Branigan
Edinburgh University
holly.branigan@ed.ac.uk

Beatrix Burghardt
Indiana University
bburghar@indiana.edu

Mariana Campos
Federal University of Saint
Catarina

Susan Carey
Harvard University
scarey@wjh.harvard.edu

Laura Carpenter
Medical University of South
Carolina
carpentl@musc.edu

Ann Chang
University of Amsterdam
blackwine@gmail.com

Franklin Chang
NTT Communications
chang.franklin@gmail.com

Ao Chen Leiden University chenao71@126.com	Denise Davidson Loyola University ddavids@luc.edu	Bruno Estigarribia University of North Carolina - Chapel Hill estigarribia@mail.fpg.unc.edu	Chisato Fuji Nanzan University, Japan d06h1002@nanzan-u.ac.jp
Joyce Chen Yeled v'Ylada Multilingual Development & Education Research Institute	Kerrie Delves University of Melbourne kdelves@unimelb.edu.au	Marc Ettlinger University of California, Berkeley marce@berkeley.edu	Alison Gabriele University of Kansas gabriele@ku.edu
Ping Chen Peking University machen@pku.edu.cn	Ozlem Ece Demir University of Chicago ece@uchicago.edu	Neiloufar Family Institute for Cognitive Science Studies neiloufar@gmail.com	Ann Gagliardi University of Maryland - College Park acg39@umd.edu
Pierina Cheung University of Toronto ahpi.cheung@gmail.com	Katherine Demuth Brown University Katherine_Demuth@brown. edu	Ashley Farris-Trimble Indiana University awfarris@indiana.edu	Bruce Gantz University of Iowa bruce-gantz@uiowa.edu
Jean-Pierre Chevrot University of Lyon jpchevrot@wanadoo.fr	Rory DePaolis James Madison University depaolra@CISAT.JMU.EDU	Deborah Fein University of Connecticut deborah.fein@Uconn.edu	Elena Gavrusseva University of Iowa elena-gavrusseva@uiowa.edu
Youngon Choi Skidmore College ychoi@skidmore.edu	Mark D'Esposito University of California, Berkeley despo@berkeley.edu	Anne Fernald Stanford University afernald@stanford.edu	Rochel Gelman Rutgers University - New Brunswick rgelman@rucss.rutgers.edu
Michelle Chouinard University of California at Merced mchouinard@ucmerced.edu	Christie Dimroth Max Planck Institute for Psycholinguistics Christine.Dimroth@mpi.nl	Ashley Fidler Georgetown University ahe3@georgetown.edu	LouAnn Gerken University of Arizona gerken@email.arizona.edu
Morten H. Christiansen Cornell University mhc27@cornell.edu	Susan Douglas University of Melbourne sdouglas@unimelb.edu.au	Amy Finn University of California, Berkeley amyfinn@berkeley.edu	Judit Gervain University of British Columbia gervain@psych.ubc.ca
D'Jaris Coles-White University of Memphis dclswhte@memphis.edu	Nigel Duffield University of Sheffield n.g.duffield@sheffield.ac.uk	Elena Florit University of Padua, Italy elena.florit@unipd.it	Alex del Giudice University of California, San Diego delgiudice@ling.ucsd.edu
Molly Collins Erikson Institute mcollins@erikson.edu	Celine Dugua Université d'Orléans, France celine.dugua@univ-orleans.fr	Claire Foley Boston College foleycw@bc.edu	Lila Gleitman University of Pennsylvania gleitman@psych.upenn.edu
Anastasia Conroy University of Maryland at College Park stacey@umd.edu	Lizbeth Duran University of California, Merced lizduran@gmail.com	Michael C. Frank Massachusetts Institute of Technology mcfrank@mit.edu	Tilbe Goksun Temple University tgoksun@temple.edu
Jean Crawford University of Connecticut, Storrs jeanerz@gmail.com	Inge-Marie Eigsti University of Connecticut, Storrs inge-marie.eigsti@uconn.edu	Shoshy Frenkel Yeled v'Ylada Multilingual De- velopment & Education Research Institute	Lindsay Goldberg Franklin and Marshal College lindsay.goldberg@fandm.edu
Suzanne Curtin University of Calgary scurtin@ucalgary.ca	Ansgar Endress Harvard University ansgar.endress@m4x.org	Naama Friedmann Tel Aviv University naamafr@post.tau.ac.il	Susan Goldin-Meadow University of Chicago sgm@uchicago.edu
Isabelle Darcy Indiana University idarcy@indiana.edu			Noah D. Goodman Massachusetts Institute of Technology ndg@mit.edu

Anthony Goodwin
University of Connecticut,
Storrs
anthony.goodwin@uconn.edu
Kyle Gorman

University of Pennsylvania
kgorman@ling.upenn.edu

Eileen Graf
University of Manchester
Eileen.Graf@postgrad.
manchester.ac.uk

Tina M. Grieco-Calub
University of Wisconsin,
Madison
grieco@waisman.wisc.edu

Elizabeth Grinnell
Skidmore College
egrinel@skidmore.edu

John Grinstead
Ohio State University
grinstead.11@osu.edu

Theres Gruter
University of Montreal
theres.gruter@umontreal.ca

Andrea Gualmini
Utrecht University
Andrea.Gualmini@let.uu.nl

Pedro Guijarro-Fuentes
University of Plymouth

Margarita Gulian
Leiden University
M.E.Gulian@let.leidenuniv.nl

Ling-Yu Guo
University of Iowa
ling-yu-guo@uiowa.edu

Ozge Gurcanli
Johns Hopkins University
gurcanli@cogsci.jhu.edu

Aviya Hachohen
Ben-Gurion University of the
Negev
aviya@bgu.ac.il

Rachel Hadzik
University of Liverpool

Paul Hagstrom
Boston University
hagstrom@bu.edu

Fay Halberstam
Yeled v'Ylada Multilingual
Development & Education
Research Institute

Robert Hartsuiker
Max Planck Institute for
Evolutionary Anthropology
robert.hartsuiker@ugent.be

Marc Hauser
Harvard University
mdh@wjh.harvard.edu

Jessica Hay
University of Wisconsin -
Madison
hay@waisman.wisc.edu

Julia Hayden
Harvard University
haydenju@gse.harvard.edu

Sarah Haywood
University of Edinburgh
sarah.haywood@ed.ac.uk

Petra Hendriks
University of Groningen
P.Hendriks@rug.nl

Birgit Herold
University of Potsdam
birgit.herold@gmx.net

Julia Herschensohn
University of Washington
herschen@u.washington.edu

Kathy Hirsh-Pasek
Temple University
khirshpa@temple.edu

Barbara Hoehle
University of Potsdam
hoehle@uni-potsdam.de

Becky H. Huang
University College London
beckyhuang@gmail.com

Yi Ting Huang
Harvard University
huang@wjh.harvard.edu

Tim Hunter
University of Maryland -
College Park
timh@umd.edu

Nereyda Hurtado
Stanford University
nhurtado@stanford.edu

William Idsardi
University of Maryland at
College Park
idsardi@umd.edu

Michael Iverson
University of Iowa

Gul Jaffery
University of Connecticut,
Storrs
gul.jaffery@uconn.edu

Gaja Jarosz
Yale University
gaja.jarosz@yale.edu

Kyong-sun Jin
Yonsei University
kjin1023@gmail.com

Megan Johanson
University of Delaware
majohanson@psych.udel.edu

J. Alex Johnson
Yale University
j.alex.johnson@yale.edu

Tiffany Judy
University of Iowa

Sun-Ah Jun
University of California-Los
Angeles
jun@humnet.ucla.edu

Rene Kager
Utrecht University
rene.kager@let.uu.nl

Carla Hudson Kam
University of California -
Berkeley
clhudson@berkeley.edu

Frank Keller
University of Edinburgh
keller@inf.ed.ac.uk

Keegan Kelsey
University of Iowa
keegan-kelsey@uiowa.edu

Tamar Keren-Portnoy
University of York
tkp502@york.ac.uk

Nihan Ketrez
Yale University
nihan.ketrez@yale.edu

Ghada Khatlab
Newcastle University
Ghada.Khatlab@newcastle.ac.uk

So Young Kim
University of Hawaii, Manoa
kims@hawaii.edu

Melissa Kline
Brown University
Melissa_Kline@brown.edu

Dilara Koçbaş
Koc University
dkocbas@yahoo.com

Agnes Melinda Kovacs
Scuola Internazionale
Superiore di Studi Avanzati
agikov1@yahoo.co.uk

Grzegorz Krajewski
University of Manchester
krajewski@postgrad.manchester.
ac.uk

Tihana Kras
Cambridge University
tk302@cam.ac.uk

Patricia Kuhl
University of Washington
pkkuhl@u.washington.edu

Aylin C. Küntay
Koc University
akuntay@ku.edu.tr

Tanja Kupisch
University of Hamburg
tanja.kupisch@mcgill.ca

Elena Kushnerenko
University College London
e.kushnerenko@gmail.com

Cornelia Lahmann
Free University of Berlin
cornelia.lahmann@fu-berlin.de

Barbara Landau Johns Hopkins University landau@jhu.edu	Elena Lieven University of London Institute in Paris	Alexandra Marquis University of Quebec - Montreal marquis.alexandra@courrier. uqam.ca	Katherine Messenger Edinburgh University K.Messenger@sms.ed.ac.uk
Jill Lany University of Wisconsin - Madison lany@wisc.edu	Diane Lillo-Martin University of Connecticut, Storrs lillo.martin@uconn.edu	Chloe Marshall City University, London Chloe.Marshall.1@city.ac.uk	Karen Miller Calvin College klm@calvin.edu
Joanne Lee Wilfrid Laurier University jlee@wlu.ca	Sarah Liszka University of London Institute in Paris saliszka@yahoo.co.uk	Kathryn Mason City University London Kathryn.Mason.1@city.ac.uk	Debra Mills Bangor University, Wales d.l.mills@bangor.ac.uk
On-Soon Lee University of Hawaii - Manoa onsoon@hawaii.edu	Ruth Litovsky University of Wisconsin, Madison litovsky@waisman.wisc.edu	Ayumi Matsuo University of Sheffield a.matsuo@sheffield.ac.uk	Aaron Mitchel Pennsylvania State University adm241@psu.edu
Heather van der Lely University College London h.vanderlely@ucl.ac.uk	Cristobal Lozano Universidad de Granada cristoballozano@ugr.es	Danielle Matthews University of Manchester danielle. matthews@manchester.ac.uk	Nadya Modyanova Massachusetts Institute of Technology nnm@mit.edu
Clara Levelt Leiden University C.C.Levelt@let.leidenuniv.nl	Weiye Ma University of Delaware weiyima@udel.edu	Rachel Mayberry University of California - San Diego rmayberry@ucsd.edu	Cecile Monjauze University College London c.monjauze@ich.ucl.ac.uk
Susan Levine University of Chicago s-levine@uchicago.edu	Junko Maekawa University of Kansas junko@ku.edu	Julien Mayor University of Oxford julien.mayor@psy.ox.ac.uk	Elliott Moreton University of North Carolina, Chapel Hill moreton@email.unc.edu
Maria Chiara Levorato University of Padua, Italy chiara.levorato@unipd.it	Laura Mahalingappa University of Texas - Austin ljmaha@mail.utexas.edu	Dan McClory Yale University daniel.mcclory@yale.edu	Gary Morgan City University London g.morgan@city.ac.uk
Casey Lew-Williams Stanford University lew-williams@stanford.edu	Becca Maller Temple University razzle217@hotmail.com	Dan McCurley Ohio State University mccurley.3@osu.edu	Jessica Morrison University of California, Berkeley langlab@berkeley.edu
Peggy Li Harvard University pegs@wjh.harvard.edu	Ashley De Marchena University of Connecticut, Storrs ashley.de_marchena@uconn. edu	Janet McLean University of Edinburgh Janet.McLean@ed.ac.uk	Vincenzo Moscati University of Siena moscati@unisi.it
Amanda Libenson University of Toronto amandalibenson@gmail.com	Erika Marchetto International School For Advanced Studies, Via Beirut erika.marchetto@sissa.it	Tamara Nicol Medina University of Pennsylvania medinatn@sas.upenn.edu	Keiko Murasugi Nanzan University, Japan murasugi@nanzan-u.ac.jp
Jeffrey Lidz University of Maryland - College Park jlidz@umd.edu	Virginia Marchman Stanford University marchman@stanford.edu	Jacques Mehler Scuola Internazionale Superiore di Studi Avanzati mehler@sissa.it	Julien Musolino Rutgers University, New Brunswick julienm@ruccs.rutgers.edu
Amy Lieberman University of California - San Diego amymliieberman@yahoo.com	Ellen Markman Stanford University markman@psych.stanford.edu	Amaya Mendikoetxea Universidad Autónoma de Madrid amaya.mendikoetxea@uam.es	Letitia Naigles University of Connecticut, Storrs letitia.naigles@uconn.edu
Moti Lieberman McGill University mordecai.lieberman@mail. mcgill.ca			

Bhuvana Narasimhan
University of Colorado at
Boulder
Narasimhan@colorado.edu

Chandan Narayan
University of Pennsylvania
chandann@gmail.com

Andrew Nevins
Harvard University
nevins@fas.harvard.edu

Rochelle Newman
University of Maryland -
College Park
rnewman@hesp.umd.edu

Rama Novogrodsky
Tel Aviv University
ramanovo@gmail.com

Janet Oh
California State University,
Northridge
janetoh@csun.edu

Diane Ohala
University of Arizona
ohalad@email.arizona.edu

Kim Ono
University of Miami - Florida
kono@post.harvard.edu

Marc van Oostendorp
Meertens Institute
Marc.van.
Oostendorp@Meertens.knaw.nl

Lee Osterhout
University of Washington
losterho@u.washington.edu

Mitsuhiko Ota
University of Edinburgh
mits@ling.ed.ac.uk

Seyda Ozcaliskan
Georgia State University
seyda@gsu.edu

Oner Ozcelik
McGill University
oner.ozcelik@mail.mcgill.ca

Despina Papadopoulou
Aristotle University of
Thessaloniki
depapa@lit.auth.gr

Anna Papafragou
Univerisyt of Delaware
papafragou@psych.udel.edu

Hukua Parish-Morris
Temple University
jparish@temple.edu

Joe Pater
University of Massachusetts,
Amherst
pater@linguist.umass.edu

Kathleen Peets
York University
kpeets@yorku.ca

Sharon Peperkamp
Laboratoire de Sciences
Cognitives et
Psycholinguistique, France
peperkamp@ens.fr

Ana T. Perez-Leroux
University of Toronto
at.perez.leroux@utoronto.ca

Alexandra Perovic
Massachusetts Institute of
Technology
perovic@mit.edu

Colin Phillips
University of Maryland at
College Park
colin@umd.edu

Antje Pillunat
University of Cologne
apilluna@uni-koeln.de

Mihaela Pirvulescu
University of Toronto,
Mississauga
ma.pirvulescu@utoronto.ca

Louisa Plotkin
Trinity College
Louisa.Plotkin@trincoll.edu

Ferran Pons
Universitat Autònoma de
Barcelona
fpons@psych.ubc.ca

Teresa Pratt
Ohio State University
pratt.120@osu.edu

Rachel Pulverman
University of Michigan
rpulverm@umich.edu

Ronice Muller de Quadros
Universidade Federal de Santa
Catarina
ronice@cce.ufsc.br

Michael Ramscar
Stanford University
michael@psych.stanford.edu

Vanessa Raschke
Loyola University Chicago
vraschk@luc.edu

Nan Bernstein Ratner
University of Maryland at
College Park
nratner@hesp.umd.edu

Robert Reichle
University of Texas, Austin
reichle@gmail.com

Cara Ricci
Ohio State University
ricci.19@osu.edu

Peter Richtsmeier
University of Arizona
prichts@email.arizona.edu

Hedderik van Rijn
University of Groningen
D.H.van.Rijn@rug.nl

Jacolien van Rij-Tange
University of Groningen
j.c.tange@student.rug.nl

Yves Roberge
University of Toronto
yves.roberge@utoronto.ca

Leah Roberts
Max Planck Institute for
Psycholinguistics
leah.roberts@mpi.nl

Maja Roch
University of Padua, Italy
maja.roch@unipd.it

Miguel Rodriguez-Mondonedo
Indiana University
migrodri@indiana.edu

Tom Roeper
University of Massachusetts,
Amherst
roeper@linguist.umass.edu

Kristin Rohrbeck
University of Michigan
krrohrbe@umich.edu

Sharon Ross
Ohio State University
smr@ling.osu.edu

Jason Rothman
University of Iowa
jason-rothman@uiowa.edu

Kate Rowley
City University London
Kate.Rowley.1@city.ac.uk

Phaedra Royle
University of Montreal
phaedra.royle@umontreal.ca

Jenny
University of Wisconsin, Madison
jsaffran@wisc.edu

Dorothe Salomo
Max Planck Institute for
Evolutionary Anthropology
salomo@eva.mpg.de

Sarah Sanderson
Ohio Sate University
sanderson.58@osu.edu

Raquel Santos
University of Sao Paulo
raquelss@usp.br

Susi Schiemenz
University of Wales - Bangor
s.schiemenz@bangor.ac.uk

Cristina Schmitt
Michigan State University
schmit12@msu.edu

Stathis Selimis
University of Athens
sselimis@yahoo.gr

Hyun Kyoung Seo Indiana University hyuseo@indiana.edu	Jennifer Spenader University of Groningen J.Spenader@ai.rug.nl	Kristen Syrett Rutgers University, New Brunswick k-syrett@rucss.rutgers.edu	Vina Tsakali University of Crete tsakali@phl.uoc.gr
Ludovica Serratrice University of Manchester Serratrice@manchester.ac.uk	Linda Spencer University of Iowa spencer@geneseo.edu	Helen Tager-Flusberg Boston University htagerf@bu.edu	Ianthi Tsimpli Aristotle University of Thessaloniki imt@enl.auth.gr
Christine Shea University of Calgary ceshea@ucalgary.ca	Elsa Spinelli University Pierre Mendès France - Grenoble elsa.spinelli@upmf-grenoble.fr	Eri Takahashi University of Maryland at College Park takahash@umd.edu	Laurice Tuller University Francois-Rabelais of Tours tuller@univ-tours.fr
Rushen Shi University of Quebec - Montreal shi.rushen@uqam.ca	Patti Spinner Michigan State University spinnerp@msu.edu	Mayu Takasaki University of Toronto mayu.takasaki@gmail.com	Outi Tuomainen University College London o.tuomainen@ucl.ac.uk
Anna Shusterman Wesleyan University ashusterman@wesleyan.edu	Mahesh Srinivasan Harvard University mahesh@wjh.harvard.edu	Darren Tanner University of Washington dstanner@u.washington.edu	Amanda Ulrich University of Michigan apulrich@umich.edu
Barbora Skarabela University of Edinburgh barbora@ling.ed.ac.uk	Rasmus Steinkrauss University of Groningen r.g.a.steinkrauss@rug.nl	Roberta Tedeschi University of Utrecht Roberta.Tedeschi@let.uu.nl	A. Engin Ural Koc University aural@ku.edu.tr
Katrin Skoruppa Laboratoire de Sciences Cognitives et Psycholinguistique, France skoruppa@ens.fr	Nola Stephens Stanford University nola@stanford.edu	Joshua B. Tenenbaum Massachusetts Institute of Technology jbt@mit.edu	Daniel Valois University of Montreal daniel.valois@umontreal.ca
Susie Smedesdran Yeled v'Ylada Multilingual Development & Education Research Institute	Helen Stickney University of Pittsburgh hstickne@linguist.umass.edu	Arhonto Terzi Technological Educational Institute of Patras aterzi@teipat.gr	Anna Verbuk McGill University averbuk@hotmail.com
Neal Snape Hokkaido University ne-snape@imc.hokudai.ac.jp	Lesley Stirling University of Melbourne lesleyfs@unimelb.edu.au	Anna Theakston University of Manchester anna.theakston@manchester.ac.uk	Joshua Viau Johns Hopkins University viau@cogsci.jhu.edu
Jesse Snedeker Harvard University snedeker@wjh.harvard.edu	Amy Strekas University of Maryland at College Park astrekas@gmail.com	Jamie Thomas Michigan State University thoma643@msu.edu	Marilyn Vihman University of York mv509@york.ac.uk
Hyun-joo Song Yonsei University hsong@yonsei.ac.kr	David Stringer Indiana University ds6@indiana.edu	Michael Tomasello Max Planck Institute for Evolutionary Anthropology tomasello@eva.mpg.de	Jill de Villiers Smith College jdevil@smith.edu
Jae Yung Song Brown University Jae_Yung_Song@brown.edu	Megha Sundara University of California, Los Angeles megha.sundara@humnet.ucla.edu	J. Bruce Tomblin University of Iowa j-tomblin@uiowa.edu	Peter de Villiers Smith College pdevilli@email.smith.edu
Antonella Sorace University of Edinburgh antonella@ling.ed.ac.uk	Daniel Swingley University of Pennsylvania swingley@psych.upenn.edu	John Trueswell University of Pennsylvania trueswel@psych.upenn.edu	Laura Wagner Ohio State University wagner.602@osu.edu

Elizabeth Walker
University of Iowa
elizabeth-walker@uiowa.edu

Yi-Ting Wang
Indiana University
yw@indiana.edu

Valissa Warren
Ohio State University
bichita@gmail.com

Sandra Waxman
Northwestern University
s-waxman@northwestern.edu

Adriana Weisleder
Stanford University
adrianaw@stanford.edu

Daniel Weiss
Pennsylvania State University
djw21@psu.edu

Janet Werker
University of British Columbia
jwerker@psych.ubc.ca

Mallory Wetstone
Skidmore College
mweston@skitmore.edu

Ken Wexler
Massachusetts Institute of
Technology
wexler@mit.edu

Katherine White
University of Rochester
kwhite@bcs.rochester.edu

Lydia White
McGill University
lydia.white@mcgill.ca

Frances Wilson
University of Edinburgh
frances@ling.ed.ac.uk

Bencie Woll
University College London
b.woll@ucl.ac.uk

Wilkey Wong
University of Delaware
wxwong@udel.edu

Amanda Worek
Harvard University
aworek@wjh.harvard.edu

Shu-Ju Yang
University of Chicago
sjyang@uchicago.edu

Katherine Yoshida
University of British Columbia
katie@psych.ubc.ca

W. Quin Yow
Stanford University
quin@psych.stanford.edu
Chen Yu
Indiana University
chenyu@indiana.edu

Sylvia Yuan
University of Illinois - Urbana-
Champaign
shyuan@cyrus.psych.uiuc.edu

Deniz Yüret
Koc University
dyuret@ku.edu.tr

Daniel Yurovsky
Indiana University
dyurovsk@indiana.edu

Index

A

Abarbanell, Linda 50, 73
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