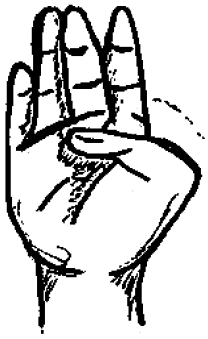

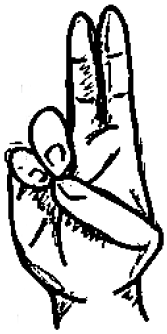

The 39th Annual

Boston University Conference on Language Development

November 7-9, 2014

BOSTON UNIVERSITY

Map of George Sherman Union (Second Floor)

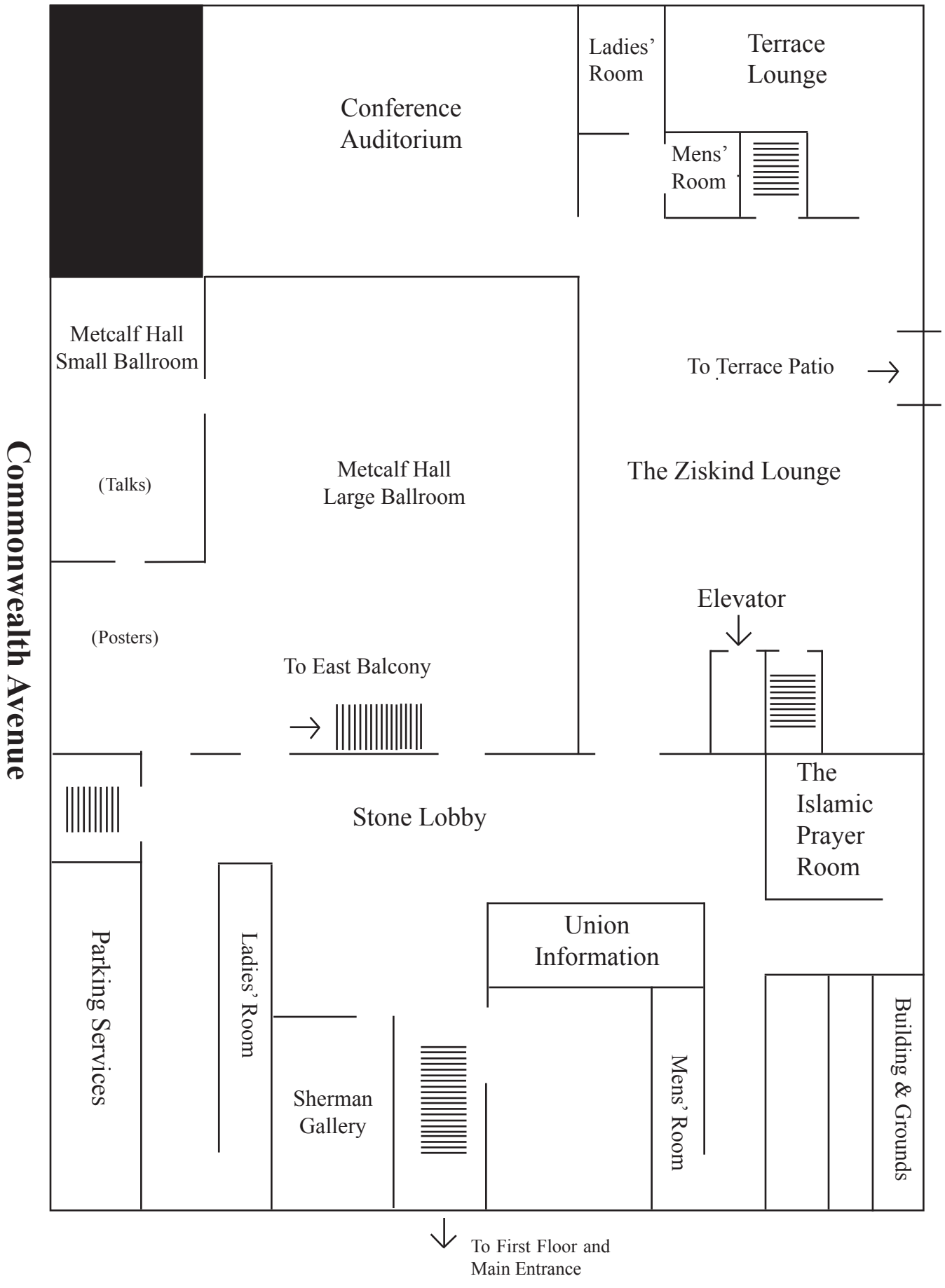

Table of Contents

Welcome

Our 39th Year
Welcome to the thirty-ninth Annual Boston University Conference On Language Development. Since 1976, BUCLD has been organized by graduate students in Boston University's Program in Applied Linguistics. With years of student work and the help of faculty advisors, the conference has become an international gathering of linguists, psychologists, and other researchers of language acquisition and development. We thank our participants for the research accomplishments they have shared with us over the past thirty-eight years.

New This Year
This year, for the first time, we will be holding a special session aimed at students and post-docs. The speaker will be Jeffrey Lidz (University of Maryland). He will be speaking in his capacity as Editor-in-Chief of *Language Acquisition: A Journal of Developmental Linguistics*, about the publication process. This session will take place from 1-2:30 p.m. on Sunday, November 9th, after the closing symposium.

Invited Speakers
At this year's conference, we are honored to have Richard Aslin and Katherine Demuth as our featured speakers. Richard Aslin will present Friday's keynote address, entitled "From sounds to words to grammatical categories: The role of distributional learning." Saturday's program will close with Katherine Demuth's plenary address, "Prosodic effects on the emergence of grammatical morphemes: Evidence from perception and production." This year's lunchtime symposium, to be held during Saturday's lunch period, is entitled "Perception and social interpretation of linguistic variation in infants and children" and will feature speakers Amanda Seidl, Laura Wagner, and Katherine Kinzler. Finally, the conference will end with this year's closing symposium entitled "Learning to think ahead – thinking ahead to learn: The role of prediction in language learning and use across the lifespan" and will feature speakers Theres Grüter, Arielle Borovsky, Edith Kaan, Kara D. Federmeier, and Edward W. Wlotko.

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 555 submissions, each of which was sent out to five reviewers for anonymous review. Of these, 70 papers and 111 posters were selected for presentation - more posters than we have ever accepted before - with an acceptance rate of 34%. We are sorry not to have had space to include more of the many excellent submissions we received. We have also included abstracts for those who generously agreed to serve as alternates in case of cancellations.

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 handbook 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.

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

The 2014 Conference Organizing Committee
Elizabeth Grillo
Kyle Jepson

Faculty Advisors
Sudha Arunachalam
Paul Hagstrom

Chairs
Pengfei Li
Fran Conlin
Maria Lamendola
Deb Waughtal
Chris Crim
Ethan Rimdzius
Kendra Dickinson
Nina Hrebenko

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/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 of 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-1147863, for which we are also 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 for their support and encouragement.

We extend special thanks to our faculty advisor, Sudha Arunachalam, and to Paul Hagstrom for his continued support despite being on sabbatical. Their expertise and guidance have been invaluable.

We would also like to acknowledge the efforts of several vital offices at Boston University. Our thanks go to Erin Phinney of Events and Conferences, whose skill and experience have provided us with the proper equipment, facilities, and refreshments for the conference. We would also like to thank Jeanette Ocampo Welch of Disability Services for assisting with organizing the American Sign Language interpretation, and Stan Gurczak of Student Production Services for bringing us a new lighting system for the interpreting team. Finally, our thanks go to Liz Politis and Katie McNamara for their support in managing the conference finances, and to Lisa Wong and Liz Maguire for collaborating on the maintenance of our online registration system.

Finally, we would like to thank the 160 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 70 papers and 111 posters. We are particularly grateful for their thoughtful attention to each submission.

Nameera Akhtar
Shanley Allen
Ben Ambridge
Inbal Arnon
Sudha Arunachalam
Jessica Barlow
Isabelle Barriere
Lilia Bartolome
Edith Bavin
Misha Becker
Ellen Broselow
Nancy Budwig
Ann Bunger
Kyle Chambers
Harald Clahsen
Erin Conwell
Peter Coopmans
Stephen Crain
Alejandrina Cristia
Jennifer Culbertson
Barbara Davis
Kamil Deen
Laurent Dekydtspotter
Laura Dominguez
Inge-Marie Eigsti
Neiloufar Family
Michael C. Frank
Maria Joao Freitas
Alison Gabriele
Anna Gavarró
Lisa Gershkoff-Stowe
Judit Gervain
Heather Goad
Roberta Golinkoff
Helen Goodluck
Peter Gordon
Janet Grijzenhout
Theres Gruter
Maria Teresa Guasti
Ayse Gurel
Martin Hackl
Paul Hagstrom
Cornelia Hamann
Kathy Hirsh-Pasek
Barbara Hoehle
Holger Hopp
Yi Ting Huang
Mary Hughes
Aafke Hulk
Nina Hyams
David Ingram
Tania Ionin
Ivan Ivanov
Michael Iverson
Gunnar Jacob
Elizabeth Johnson
Alan Juffs
Kalliopi Katsika
Dorit Kaufman
Nina Kazanina
Evan Kidd
Grzegorz Krajewski
Tanja Kupisch
Usha Lakshmanan
Thomas Lee
Claartje Levelt
Beth Levin
Casey Lew-Williams
Elena Lieven
Sarah Liszka
Heather Littlefield
Conxita Lleo
Barbara Lust
Theodoros Marinis
Lori Markson
J. Douglas Mastin
Rachel I. Mayberry
Luisa Meroni
Toby Mintz
Maria Mody
James Morgan
Alan Munn
Aparna Nadig
Letitia Naigles
Thierry Nazzi
Elissa L. Newport
Rama Novogrodsky
Akira Omaki
Mitsuhiko Ota
Seyda Ozcaliskan
Asli Ozyurek
Anna Papafragou
Johanne Paradis
Lisa Pearl
Sharon Peperkamp
Ana Teresa Perez-Leroux
Colin Phillips
Bernadette Plunkett
Lucia Pozzan
Philippe Prèvost
Rachel Pulverman
Clifton Pye
Jennie Pyers
Claire Renaud
Mabel Rice
Judith Rispens
Tom Roeper
Jason Rothman
Monika Rothweiler
Phaedra Royle
Jenny Saffran
Tetsuya Sano

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Amanda Seidl
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Ludovica Serratrice
Valerie L. Shafer
Rushen Shi
Leher Singh
Barbora Skarabela
Roumyana Slabakova
William Snyder
Melanie Soderstrom
Hyun-Joo Song
Antonella Sorace
Rex Sprouse
Jeffrey Steele
Kristen Syrett
Kriszta Szendroi
Helen Tager-Flusberg
Anne-Michelle Tessier
Rosalind Thornton
Ruth Tincoff
Almeida Jacqueline Toribio
John Trueswell
Ianthi Maria Tsimpli
Sharon Unsworth
Sigal Uziel-Karl
Elena Valenzuela
Virginia Valian
Daniel Valois
Angeliek van Hout
Spyridoula Varlokosta
Marilyn Vihman
Laura Wagner
Daniel Weiss
Lydia White
Fei Xu
Charles Yang
W. Quin Yow
Chen Yu
Daniel Yurovsky
Tania Zamuner
Andrea Zukowski
Barbara Zurer Pearson

General Information

Registration and Session Locations

All sessions will be held in the George Sherman Union located at 775 Commonwealth Avenue. Registration will take place in the second floor lobby (see diagram on the back of the front cover). You may register 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 Richard Aslin on Friday at 7:45 PM in Metcalf Large. Poster Session I (unattended) will immediately follow in Metcalf Large, Metcalf Small, and Ziskind Lounge. Desserts will be served in the Ziskind Lounge.

- The **Plenary Address** will be given by Katherine Demuth on Saturday at 5:45 PM in Metcalf Large. Poster Session II (unattended) will immediately follow in Metcalf Large, Metcalf Small, and Ziskind Lounge. Hors d'oeuvres will be served in the Ziskind Lounge.

- A **Lunchtime Symposium** entitled "Perception and social interpretation of linguistic variation in infants and children" with presentations from Amanda Seidl, Laura Wagner, and Katherine Kinzler will be held on Saturday at 12:15 PM in Metcalf Large.

- A **Closing Symposium** entitled "Learning to think ahead – thinking ahead to learn: The role of prediction in language learning and use across the lifespan" with presentations from Theres Grüter, Arielle Borovsky, Edith Kaan, Kara D. Federmeier, and Edward W. Wlotko will be held on Sunday at 11:00 AM in Metcalf Large, immediately followed by our new student workshop.

Poster Sessions

- **Poster Session I:** On Friday, 55 posters will be on display in Metcalf Large, Metcalf Small, and Ziskind Lounge. There will be one attended Poster Session at 3:00 PM, and an additional unattended session at 9:00 PM. Refreshments will be available at both sessions.

- **Poster Session II:** On Saturday, 55 posters will be on display in Metcalf Large, Metcalf Small, and Ziskind Lounge. There will be one attended Poster Session at 3:15 PM, and an additional unattended session at 7:00 PM. Refreshments will be available at both sessions.

- **Poster Symposium:** At both poster sessions, a special poster symposium will be on display entitled "Linguistics for Everyone: Engaging a broader public for the scientific study of language acquisition," and co-organized by Joan Maling and Barbara Pearson.

Special Sessions

- A special session entitled **"What's Hot and How to Apply"** will be facilitated by Lisa Freund (NIH) and Joan Maling (NSF) on Saturday at 8:00 AM in the Conference Auditorium.

- A special **Student Workshop** hosted by Jeffrey Lidz will be held immediately following our Closing Symposium in the Conference Auditorium, from 1:00 PM to 2:30 pm on Sunday.

- The **Society for Language Development** will hold its annual symposium, "The Representation of Number: Origins and Development," on Thursday, November 6 at 1:00 PM in Metcalf Large, with a reception following immediately in Metcalf Small. Speakers include Elizabeth Spelke, Elizabeth Brannon, and Jessica Cantlon.

- **NSF and NIH consultation** hours will be held in the Ziskind Lounge. Both sessions will be held on Saturday from 9:30 AM until 12:00 PM, and again from 2:30 PM until 5:00 PM.

- A **BUCLD Business Meeting** will be held on Friday from 12:30 to 1:45 PM in the Conference Auditorium.

Additional Information

- **Parking** is available at the Agganis Arena Garage (925 Commonwealth Avenue) for $1 per hour, and at the Granby Lot (665 Commonwealth Avenue) and the Warren Towers Garage (700 Commonwealth Avenue) for $10 per car per day. Please mention that you are with BUCLD if asked. Free on-street parking is also available on Sunday. More information can be found at http://www.bu.edu/parking.

- **Temporary luggage storage space** is 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.
- **Wireless internet access** is available throughout the GSU. Information for connecting is given in the box below.
- **Refreshments** will be served in Ziskind Lounge before the morning sessions, during breaks, and during poster sessions. A list of local restaurants is available at the information table. The Food Court on the ground floor of the George Sherman Union offers a wide selection but is cash-only.
- **The 40th Annual Boston University Conference on Language Development** is tentatively scheduled for November 6 - 8, 2015, at Boston University.

The Registration desk provides the following services:
ASL Interpreters (Please inquire when you arrive) * Lost and Found * Campus Maps * MBTA Maps * General Information

INTERNET INFO

Guest ID: 129344

Account Name: bucld39

NIH/NSF Consultation Hours

Lisa Freund (NIH) and Joan Maling (NSF)

Saturday 9:30 AM - 12:00 PM & 2:30 - 5:00 PM

Schedule at a Glance

Thursday, November 6

1:00 PM - 5:00 PM	Society for Language Development Annual Symposium

Friday, November 7

8:00 AM	Registration begins
9:00 AM - 5:00 PM	Book exhibits
9:00 AM - 10:30 AM	Talks
10:30 AM - 11:00 AM	Morning break with refreshments
11:00 AM - 12:30 PM	Talks
12:30 PM - 2:00 PM	Lunch break / BUCLD business meeting
2:00 PM - 3:00 PM	Talks
3:00 PM - 4:15 PM	Poster Session I attended with refreshments, and Poster Symposium
4:15 PM - 5:45 PM	Talks
5:45 PM - 7:45 PM	Dinner break
7:45 PM - 9:00 PM	Keynote Address
9:00 PM - 9:45 PM	Reception, Poster Session I unattended with refreshments

Saturday, November 8

8:00 AM	Funding Symposium
8:30 AM	Registration begins
9:00 AM - 10:30 AM	Talks
10:00 AM - 6:00 PM	Book exhibits
10:30 AM - 11:00 PM	Morning break with refreshments
11:00 AM - 12:00 PM	Talks
12:15 PM - 2:15 PM	Lunchtime Symposium
2:15 PM - 3:15 PM	Talks
3:15 PM - 4:30 PM	Poster Session II attended with refreshments, and Poster Symposium
4:30 PM - 5:30 PM	Talks
5:45 PM - 7:00 PM	Plenary Address
7:00 PM - 7:45 PM	Poster Session II unattended with refreshments

Sunday, November 9

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	Closing Symposium
1:00 PM	Student Workshop

FRIDAY, NOVEMBER 7

Time	Session A (Metcalf Small)	Session B (Terrace Lounge)	Session C (Conference Auditorium)
9:00 - 5:00	**BOOK EXHIBIT**		
9:00	Vowels then consonants: behavioral switch between 6 and 8 months in recognizing segmented word forms *L. Nishibayashi, T. Nazzi*	Early child L2 acquisition: Age or input effects? Neither, or both? *S. Unsworth*	Explaining Children's Wh-In Situ Questions: Against Economy *M. Becker, M. Gotowski*
9:30	Communicative status underlies the speech advantage in infants' abstract rule learning *B. Ferguson, C. Lew-Williams*	The Linguistic Proximity Model: The case of Verb-Second revisited *R. Mykhaylyk, N. Mitrofanova, Y. Rodina, M. Westergaard*	Acquisition of the Korean reflexive pronouns in intra-sentential binding and extra-sentential binding *K. Joo, K. Deen, W. O'Grady*
10:00	Acoustic cues to phonological status in infant-directed speech *A. Cristia, K. Onishi, G. Alamian, M. Versteegh, A. Seidl*	The role of experience in how children discriminate between unfamiliar languages *C. Potter, J. Saffran*	Comprehension of wh-words in Mandarin-speaking High-functioning Children with Autism Spectrum Disorders *Y. Su, L. Su*
10:30	**BREAK (Ziskind Lounge)**		
11:00	Meaning Specificity in One-Year-Olds' Word Comprehension *E. Bergelson, R. Aslin*	Picking up after sloppy children: What pronouns reveal about children's analysis of English comparative constructions *V. Gor, K. Syrett*	Real-time processing of classifier information by L2 speakers of Chinese *E. Lau, T. Gruter*
11:30	Frequency, imageability and form class in word acquisition *F. Smolik*	Beyond production: Searching for absolute and relative interpretations of superlatives *L. Tieu, Z. Shen*	The role of varied input in the divergent outcomes of heritage language acquisition *A. Albirini*
12:00	The acquisition of verbal negation: early comprehension and the emergence of a combinatorial language of thought *R. Feiman, S. Mody, S. Carey, J. Snedeker*	Question-Answer (In)Congruence in the Acquisition of Only *M. Hackl, A. Sugawara, K. Wexler*	The Superset Bias in Second Language Acquisition: A study on Early L2 Japanese *M. Smith, B. VanPatten*
12:30	**LUNCH BREAK/ BUCLD BUSINESS MEETING (Conference Auditorium)**		
2:00	Segmenting words from real speech - a meta-analysis and public database *C. Bergmann, A. Cristia*	The impact of pronoun type and grammatical skills on child processing of object relative clauses *Y. Haendler, R. Kliegl, F. Adani*	Learning how to create a coherent ASL story: Insights from Native vs L2 Learners *A. Frederiksen, R. Mayberry*
2:30	18-month-olds compensate for a phonological alternation *A. Chong, M. Sundara*	On the relation between implicit and explicit measures of child language development: Evidence from relative clause processing in 4-year-olds *F. Adani, T. Fritzsche*	Neural language processing in adolescent first-language learners: Case studies in American Sign Language *R. Mayberry, T. Davenport, N. Ferjan Ramirez, M. Leonard, E. Halgren*
3:00	**ATTENDED POSTER SESSION I AND POSTER SYMPOSIUM (Metcalf Large, Metcalf Small, and Ziskind Lounge)**		
4:15	Pointing and Eyegaze in Bimodal Bilingual Language Development *K. Gokgoz, R. Müller de Quadros, J. Oliveira, D. Lillo-Martin*	Perceptual Characteristics of Spontaneous Speech in High Functioning Autism: Are We Discriminating Listeners? *M. Andrianopoulos, E. Zaretsky, C. McGuigan, R. Warshaw*	Abstract Representation of Feature Agreement across Grammatical Categories in Infants *A. Melançon, R. Shi*
4:45	Comprehension of Code-Switching by Bilingual 20-Month-olds *E. Morin-Lessard, K. Byers-Heinlein, C. Lew-Williams*	Seeing to hear? Gaze to speaking faces in children with autism spectrum disorders. *J. Irwin, L. Brancazio, J. Turcios, N. Gumkowski, J. Preston*	Does negative feedback have an effect on language acquisition? *E. Kulinich, P. Royle, D. Valois*
5:15	Parsing strategies in code-switched relative clause constructions: an eye-tracking study *E. Valenzuela, T. Zamuner, R. Klassen, K. Borg*	Maternal responsiveness to child gesture facilitates word learning in children with autism and Down syndrome *N. Dimitrova, S. Ozcaliskan, L. Adamson*	Cue reliability in the acquisition of Japanese case markers *A. Omaki, T. Kobayashi, J. Lidz*
5:45	**DINNER BREAK**		
7:45	**KEYNOTE ADDRESS (Metcalf Large)** From sounds to words to grammatical categories: The role of distributional learning *Richard Aslin, University of Rochester*		
9:00	**UNATTENDED POSTER SESSION I (Metcalf Large, Metcalf Small, and Ziskind Lounge)**		

SATURDAY, NOVEMBER 8

Time	Session A (Metcalf Small)	Session B (Terrace Lounge)	Session C (Conference Auditorium)
8:00	NSF/NIH Funding Symposium: "What's Hot and How to Apply" (Conference Auditorium)		
10:00 - 6:00	**BOOK EXHIBIT**		
9:00	Homologies Between Language and Event Cognition: *F. Wilson, E. Unal, J. Trueswell, A. Papafragou*	Revisiting the Epistemic Gap: evidence for a grammatical source *A. Cournane*	Evidence for a substantive bias in synchronic grammar *D. Baer-Henney, F. Kügler, R. van de Vijver*
9:30	Left-Right Language and Perspective Taking in Tseltal Mayan Children *L. Abarbanell, P. Li*	Differences between Dutch and English children's interpretation preferences of quantifiers: input or acquisition stage? *M. van Koert, O. Koeneman, F. Weerman, A. Hulk*	A child-specific compensatory mechanism in the acquisition of English /s/ *H. Bang, M. Clayards, H. Goad*
10:00	Mechanisms for Linguistic Relativity in Child Memory *M. Ettlinger, J. Lanter*	Mapping properties to individuals in language acquisition *K. Syrett*	In constrained contexts, preschoolers' recognition of accented words is excellent *S. Creel, D. Rojo, N. Paullada*
10:30	**BREAK (Ziskind Lounge)**		
11:00	Determining the abstractness of Determiners *C. Yang, E. Wadsworth, V. Valian*	How early do children understand different types of iconicity in gesture? *L. Hodges, S. Ozcaliskan, R. Williamson*	Acquiring Murrinhpatha: an endangered polysynthetic Indigenous language of Northern Australia *W. Forshaw, B. Kelly, G. Wigglesworth, R. Nordlinger*
11:30	What can children learn from 6 million words? *J. Willits, M. Jones*	Signatures of Domain-General Categorization Mechanisms in Color Word Learning *D. Yurovsky, K. Wagner, D. Barner, M. Frank*	Production-Comprehension Asymmetries in Language Acquisition: The Case of Evidential Morphology *E. Unal, A. Papafragou*
12:15	**LUNCH SYMPOSIUM (Metcalf Large)** Perception and social interpretation of linguistic variation in infants and children *Amanda Seidl, Purdue University* *Laura Wagner, Ohio State University* *Katherine Kinzler, University of Chicago*		
2:15	Infants are sensitive to coarticulatory cues during word recognition *T. Mahr, B. McMillan, J. Saffran, J. Edwards*	Executive Functions Predictors of Learners' Language Processing Abilities: A Training Study *L. Pozzan, K. Woodard, J. Trueswell*	Young children's comprehension of negation *T. Reuter, R. Feiman, J. Snedeker*
2:45	Learning novel neighbors: syntactic category matters *I. Dautriche, D. Swingley, A. Christophe*	Potential clinical markers for SLI in bilingual children *S. Ferré, C. dos Santos, L. de Almeida*	The developing integration of discourse cues in children's sentence processing *H. Rabagliati, A. Heron, A. Young*
3:15	**ATTENDED POSTER SESSION II AND POSTER SYMPOSIUM (Metcalf Large, Metcalf Small, and Ziskind Lounge)**		
4:30	Verb learning biases extend across semantic fields *A. Geojo, J. Snedeker*	Linking conversational inferences to the speaker's knowledge state *A. Papafragou, C. Friedberg, M. Cohen*	Pause Trumps All: A Corpus-Based Study on Prosodic Boundary Cues in Japanese Child-Directed Speech *B. Ludusan, A. Martin, R. Mazuka, A. Cristia, E. Dupoux*
5:00	Development of the verb-event link between 14 and 18 months *A. He, J. Lidz*	Acoustic Correlates of Information Structure in Child and Adult Speech *J. Thorson, J. Morgan*	Cognitive Limitations Impose Advantageous Constraints on Word Segmentation *K. Hitczenko, G. Jarosz*
5:45	**PLENARY ADDRESS (Metcalf Large)** Prosodic effects on the emergence of grammatical morphemes: Evidence from perception and production *Katherine Demuth, Macquarie University*		
7:00	**UNATTENDED POSTER SESSION II (Metcalf Large, Metcalf Small, and Ziskind Lounge)**		

SUNDAY, NOVEMBER 9

Time	Session A (Metcalf Small)	Session B (Terrace Lounge)	Session C (Conference Auditorium)
9:00	Abstract knowledge of non-canonical word order by 21 month olds *R. Lassotta, A. Omaki, J. Franck*	L2 Learners are Less Sensitive to Competing Alternatives for Novel Utterances *C. Robenalt, A. Goldberg*	Maturation constrains the effect of exposure in linking language and core conceptual processes in healthy preterm infants *D. Perszyk, G. Chan, S. Waxman*
9:30	Phrasal prosody constrains online syntactic analysis in two-year-old children *A. de Carvalho, I. Dautriche, A. Christophe*	Is more always better? The perception of Dutch vowels by English versus Spanish learners *S. Alispahic, P. Escudero, K. Mulak*	Language development of internationally adopted children: length of institutionalization outweighs age-of-acquisition *N. Rakhlin, S. Hein, E. Grigorenko*
10:00	Abstract representation of Object-Verb order by 19 months: An experiment on Hindi-Urdu *A. Gavarró, M. Leela, L. Rizzi, J. Franck*	Interactions between statistical aggregation and hypothesis testing mechanisms during word learning *A. Romberg, C. Yu*	Maximizing Vocabulary Development through Shared Book Reading and Play *T. Speiwak-Toub, B. Hassinger-Das, H. Ilgaz, K. Hirsh-Pasek, R. Golinkoff, D. Dickinson, M. Collins, K. Nesbitt, A. Nicolopoulou*
10:30	**BREAK (Ziskind Lounge)**		
11:00-12:45	**CLOSING SYMPOSIUM (Metcalf Large)** Learning to think ahead – thinking ahead to learn: The role of prediction in language learning and use across the lifespan *Theres Grüter, University of Hawai'i* *Arielle Borovsky, Florida State University* *Edith Kaan, University of Florida* *Kara D. Federmeier, University of Illinois at Urbana-Champaign* *Edward W. Wlotko, Tufts University*		
1:00-2:30	**STUDENT WORKSHOP (Conference Auditorium)** The Publication Process *Jeffrey Lidz, University of Maryland*		

ALTERNATES

Authors	Title
S. Bosch, H. Trompelt, A. Leminen, H. Clahsen	Late bilinguals access lexical-semantic and grammatical information in parallel: A cross-modal ERP repetition priming study
S. Eleonore, L. Bogaerts, M. Page, M. Edwards, W. Duyck, A. Szmalec	A Hebb learning approach to developmental differences in phonological learning
M. Iraola Azpiroz, M. Ezeizabarrena	The linguistic- and the learner-default converge in some null subject languages
B. Janssen, N. Meir, A. Baker, S. Armon-Lotem	On-line comprehension of Russian case cues in monolingual and bilingual children with L2/Hebrew and L2/Dutch
K. Lichtman	Age, instruction, and implicit vs. explicit second language learning
M. Ovsepyan, U. Lakshmanan	False Belief Reasoning and the Acquisition of Relativization and Scrambling in Russian Children
K. Shaw, H. Bortfeld	Infants are sensitive to asynchronous audiovisual speech
S. Sigurjónsdóttir	Acquisition of the "New Impersonal Construction" in Icelandic
B. Skarabela, A. Conner, K. Ruthven, M. Ota	24-month-olds but not 18-month-olds comprehend 'it' in ambiguous contexts: Evidence from preferential looking

POSTER SESSION I

Friday, November 7
Metcalf Large, Metcalf Small, and Ziskind Lounge
Posters will be attended from 3:00 PM - 4:15 PM and unattended from 9:00 PM - 9:45 PM

Authors	Title
A. Aravind, J. de Villiers	Implicit alternatives insufficient for children's SIs with some
S. Arunachalam	How do children parse naturalistic input? A new methodology
M. Babineau, R. Shi, A. Melançon	The role of function words and prosody for phrasal parsing in preverbal infants
A. Bernard, L. Feldman, K. Onishi	Children's generalization of novel phonotactics at the syllable level
D. Bernier, M. Soderstrom	9- and 12-month-olds fail to perceive infant-directed-speech in an ecologically valid multi-talker background
A. Borten, Y. Huang	Coordination of linguistic and cognitive processes during reading development
K. Brooks, C. Lew-Williams	The semantic garden path effect: Young children's abandonment of semantic expectations
V. Brunetto, T. Roeper	Are rare constructions late in acquisition? The case of near-reflexivity
J. Burling, C. Tran, H. Yoshida	Evidence for a speed-accuracy trade-off in bilinguals: A diffusion model approach to the Attention Network Task
K. Byers-Heinlein, E. Morin-Lessard, D. Poulin-Dubois, S. Norman	Monolingual and bilingual infants' attention to talking faces from 5-26 months
J. Campbell, D.G. Hall	Lexical Comprehension in 6-Month-Olds
D. Chen Pichler, R. Müller de Quadros, D. Lillo-Martin	Code-Blending in Bimodal Bilingual Development is Constrained
C. Christodoulou	Morphosyntactic Illusions in Down Syndrome: The Role of Phonetics/Phonology
C. Chu, U. Minai	The role of Theory of Mind in the acquisition of demonstratives: Evidence from child Chinese
C. Core, E. Hoff	Phonetic properties of L2 child directed speech and effects on child language development
S. Durrleman, J. Franck	Language for mentalizing: A study of Autism Spectrum Disorders
L. Factor, L. Gershkoff-Stowe, J. Anderson	The Emerging Gesture-Speech Relationship in Preschoolers Who Do and Do Not Stutter
C. Fennell, C. Laliberte	Distributional learning of phoneme categories in bilingual and monolingual infants
H. Forsythe	Person and number asymmetries in child comprehension of Spanish agreement and object clitics
R. Foushee, N. Falkou, P. Li	'Two-pound cookies' or 'two pounds of cookies': Children's appreciation of quantity expressions
M. Frank, D. Yurovsky, R. Krishna, V. Marchman	Wordbank: An Open Repository for Developmental Vocabulary Data
J. Gerard, J. Lidz	4-5 year olds do not attach non-finite adjuncts too low
E. Graf, K. Leffel, E. Suskind, D. Suskind	Parent-directed language intervention for children of low socioeconomic status (SES)

POSTER SESSION I

Friday, November 7
Metcalf Large, Metcalf Small, and Ziskind Lounge
Posters will be attended from 3:00 PM - 4:15 PM and unattended from 9:00 PM - 9:45 PM

Authors	Title
M. Gross, E. Lopez, M. Kaushanskaya	On-line auditory processing of code-switched sentences by bilingual children
K. Hendrickson, M. Walenski, M. Friend, T. Love	Neural response to spoken words and environmental sounds in toddlers and adults
L. Horton, D. Brentari	Arguments and Events in Second-Generation Homesign
Y. Huang, K. Leech, M. Rowe	Understanding difficulties in children's interpretation of passives: A SES comparison
Y. Kim, M. Sundara	6-month-olds can segment and decompose morphologically-complex words
M. Kline, J. Snedeker	Daxing my toy or Daxing TO my toy? Two-year-olds use syntax to override rational imitation effects
F. Köder	Interactive participation facilitates children's processing of direct speech reports
H. Konishi, R. Golinkoff, K. Hirsh-Pasek	Semantic reorganization: Does language influence the perception of event components?
H. Koulidobrova	Hearing vs. CI: argument omission in ASL-English bilingualism and advantages of deafness
T. Levari, J. Snedeker	What bilinguals can teach us about ambiguity resolution in online sentence comprehension
S. Lima, P. Li, J. Snedeker	Acquiring the denotation of object-denoting nouns in a language without partitives
K. Lucca, M. Wilbourn	Developmental Changes in Infants' Use of Communicative Gestures: Implications for Word Learning
A. Marquis, P. Royle	Are second language learners just as good at verb morphology as first language learners?
M. Moyer, K. Harrigan, V. Hacquard, J. Lidz	2-year-olds' comprehension of personal pronouns
C. Name, D. Novais Uchôa, S. Teixeira	Infants use phonologically strong function words in word segmentation and categorization
M. Noguchi, C. Hudson Kam	Learning phonetic categories with phonotactics: the influence of predictability and phonetic naturalness
N. Orita, H. Ono, N. Feldman, J. Lidz	A conservative interpretation of the reflexive zibun by Japanese children
O. Ozcelik, R. Sprouse	L2 acquisition of Turkish vowel harmony and knowledge of the universal 'No Crossing Constraint'
A. Pace, P. Yust, J. de Villiers, A. Iglesias, M. Wilson, K. Hirsh-Pasek, R. Golinkoff, A. Takahesu Tabori, K. Strother-Garcia, K. Ridge	Examining the Validity of a Computer-Based Language Assessment for Preschool Children
J. Ren, J.L. Morgam	Developmental Continuity in Lexical Representations
I. Rodriguez-Ordoñez	The acquisition of nominal and verbal inflectional morphology: Evidence from Basque ergativity in adult L2 speakers
J. Schwab, C. Lew-Williams	Allow me to repeat myself: Repeating words in adjacent utterances facilitates young children's word learning

POSTER SESSION I

Friday, November 7 Metcalf Large, Metcalf Small, and Ziskind Lounge Posters will be attended from 3:00 PM - 4:15 PM and unattended from 9:00 PM - 9:45 PM	
Authors	**Title**
E. Shimanskaya	Beyond a Word: Language (Non)Selectivity in Bilingual Processing of Multiword Sequences
S. Shittu, A. Tessier	Perceptual attrition of lexical tone among L1 Yoruba-speaking children in Canada
A. Sugawara, K. Wexler	Japanese children accept inverse-scope readings induced by scrambling, but they do not accept unambiguous inverse-scope readings induced by prosody
M. Sundara, C. Ngon, K. Skoruppa, N. Feldman, G. Onario, J. Morgan, S. Peperkamp	Young infants' discrimination of subtle phonetic contrasts
K. Tillman, D. Barner	Preschoolers use lexical contrast to learn duration words
V. Valian, E. Qurk	(Lack of) Frequency Effects in Children's Early Speech
D. Weatherhead, K. White	Infants use talker-specific phonetic detail during word learning
T. Zamuner, M. Weinhold, S. Strahm	Phoneme age-of-acquisition effects on phonological priming
B. Zinszer, T. Poepsel, R. Aslin, D. Weiss	When to hold and when to fold: Detecting structural changes in statistical learning

POSTER SESSION II

Saturday, November 8 Metcalf Large, Metcalf Small, and Ziskind Lounge Posters will be attended from 3:15 PM - 4:30 PM and unattended from 7:00 PM - 7:45 PM	
Authors	**Title**
H. Ahn	Definiteness as uniqueness in L2 online processing
J. Bang, N. Ju, Y. Choi	Generic interpretations among Korean-learning 3-year-olds
V. Bláhová, F. Smolík	How Czech children comprehend verb number morphemes: singular and plural show different relation with age
T. Boerma, M. Timmermeister, P. Leseman, F. Wijnen, E. Blom	Predicting grammatical morpheme production in children with and without Specific Language Impairment: Can sustained attention help?
C. Cantiani, C. Piazza, V. Riva, R. Bettoni, G. Melesi, C. Marino	Brain responses to cross-modal semantic priming in Italian twenty-month-olds
P. Cheung, M. Dale, M. Le Corre	The syntax-semantics mapping in the acquisition of complex numerals in 4- to 6-year-olds
J. Choe	Raising over an Experiencer in English L2 Acquisition
Y. Choi, J. Bang, E. Jung, N. Ju, M. Nam	Five-year-olds consider the source accuracy in their evidential reasoning
W. Chu, B. Schwartz	Testing native and nonnative knowledge of the licensing conditions of Chinese wh-existentials

POSTER SESSION II

Saturday, November 8
Metcalf Large, Metcalf Small, and Ziskind Lounge
Posters will be attended from 3:15 PM - 4:30 PM and unattended from 7:00 PM - 7:45 PM

Authors	Title
M. Clauss	The Syntax and Semantics of Free Relative Clauses in Child English
C. Contemori, G. Dussias	Pronoun resolution in L2 discourse: evidence of the time course from eye-tracking
G. Del Puppo, M. Pivi, A. Cardinaletti	Production of cleft sentences in Italian-speaking children across different types of task
A. Delcenserie, F. Genesee	The language abilities of bilingual internationally adopted children: Three case studies
G. Doyle, K. Bicknell, R. Levy:	Learning Constraint Violations Directly from Data: An Emergentist Model of Phonology
P. Escudero, K. Mulak, H. Vlach	Infants' cross-situational learning of minimally different words depends on the type and magnitude of the phonological contrast
M. Fedzechkina, E. Newport, T. Jaeger	Trading off robust information transmission in language learning and language structure
M. Fort, P. Brusini, J. Carbajal, G. Dehaene-Lambertz, S. Peperkamp	The acquisition of native assimilation rules: evidence from event-related potentials
E. García-Alcaraz, M. Tarrés, A. Biró, A. Bel	The acquisition of co-referential properties of pronouns in bilingual and L2 Spanish speakers
Z. Harmon, M. Redford, L. Dilley	Intra-clausal Prosodic Boundary Placement as a Window into Children's Speech Planning
K. Hawthorne, L. Rudat, L. Gerken	Prosody as a Cue to Hierarchical Structure for Toddlers and Adults
A. Hendricks, K. Miller, C. Jackson	Regularization or Probability-Matching? Acquisition of Inconsistent Gender Marking in Fering-Speaking Children
M. Johnson, J. Pate, B. Börschinger, K. Demuth	Syllable weight and stress provide similar information for word segmentation
K. Kim, B. Schwartz, W. O'Grady	Learnability in the acquisition of the English tough construction by L1-Korean adult/child L2 learners
I. Lammertink, T. Benders, M. Casillas, B. Post, P. Fikkert	Intonation and lexicosyntax in turn projection by Dutch and English toddlers
P. Li, P. Cheung, K. Aguayo, S. Carey	The Role of Language in Object Individuation and Identification: Insights from the Acquisition of Partitive Expressions
C. Lindenbergh, A. van Hout, B. Hollebrandse	The acquisition of sentence ellipsis in Dutch preschoolers
A. Martin, K. Tajima, R. Mazuka	Japanese mothers undo function word reduction when talking to infants
K. McCarthy, K. Skoruppa	The interplay between L1 and L2 phonotactics in sequential bilingual children
T. Nakato	Gender Information of Possessive Pronouns: How Does It Work in Child English?
J. Nilsson, K. Catto, H. Rabagliati	Awareness and monitoring in children's referential communication
T. Okuma	The interpretation of Japanese pronouns by L1 English and L1 Spanish speakers
A. Orena, K. White	Mechanisms Underlying Toddlers' Processing of Disfluent Speech

Saturday, November 8
Metcalf Large, Metcalf Small, and Ziskind Lounge
Posters will be attended from 3:15 PM - 4:30 PM and from 7:00 PM - 7:45 PM

Authors	**Title**
M. Paquette-Smith, E. Johnson	Infants' language discrimination of accented speech samples
J. Paul, T. Gruter	Order-of-acquisition effects in the learning of Chinese classifiers
A. Perez-Leroux, A. Castilla-Earls, T. Peterson, D. Massam, S. Bejar	Children's acquisition of complex modification
S. Poltrock, T. Nazzi	Early consonant / vowel asymmetry: Evidence from word recognition in French-learning 11-month-olds
J. Pyers, D. Gagne, A. Senghas, M. Coppola	A novel, reliable method for investigating Theory of Mind in low-verbal populations: An experiential false-belief task
C. Quam, K. Golisch, A. Lotto, L. Gerken	Why are Infants Precocious Language Learners? Implications for Adult Second-Language Learning
K. Rombough, R. Thornton	Negative Sentences in Children with SLI
J. Schaeffer, M. Van Witteloostuijn, D. De Haan	Overgeneration of indefinite articles in Autism and SLI
M. Schreiner, N. Altvater-Mackensen, N. Mani	Impact of long-term exposure on infants' word segmentation in infant- and adult-directed speech contexts
A. Shoaib, J. Lany	The Power of Baby Talk: Infant-Directed Speech Promotes Word Recognition
R. Slabakova, L. White	Pronoun Interpretation in the Second Language: DPBE or not?
I. Strangmann, A. Slomp, A. van Hout	Context and the acquisition of Dutch wh-questions: The effect of topicality and thematic roles
K. Sugisaki, K. Murasugi	Wh-islands in Child Japanese Revisited
Y. Suzuki, Y. Huang, R. DeKeyser	Comparisons of Implicit Knowledge in Second Language Acquisition: An Eye-tracking Study
G. Synnaeve, I. Dautriche, B. Börschinger, A. Christophe, M. Johnson, E. Dupoux	Context helps in learning to segment words: evidence from a modeling study
A. Takahesu Tabori, J. Pyers, T. Gollan	Small Differences in Age of Acquisition Reduce Tip-of-the-Tongue Rates in Bilinguals
M. Timmermeister, T. Boerma, P. Leseman, F. Wijnen, E. Blom	Lexical access and vocabulary in Turkish and Moroccan child heritage learners in the Netherlands
H. Trompelt, S. Bosch, H. Clahsen	How morphosyntax is represented in the L2 mental lexicon
M. Vernice, M. Guasti, C. Manetti, H. Branigan	Syntactic choice in children's production: effects of thematic structure and conceptual accessibility
M. Yatbaz, V. Cirik, A. Küntay, D. Yüret	Paradigmatic representations outperform syntagmatic representations in distributional learning of grammatical categories
W. Yow, F. Patrycia	Challenging the "linguistic incompetency hypothesis" - Code-switching positively impacts on lexical development in bilingual preschoolers
P. Zhou, S. Crain, L. Gao, Y. Tang	Aspectual marking in Mandarin-speaking children with high-functioning autism
B. Zurer Pearson	Linguistic and pragmatic ambiguity in quantified expressions: Implications for mathematics teaching and testing of monolingual and bilingual students

Session A--Metcalf Small

Vowels then consonants: behavioral switch between 6 and 8 months in recognizing segmented word forms

Leo-Lyuki Nishibayashi, University of Paris V, Laboratoire de Psychologie de la Perception
Thierry Nazzi, CNRS - Université Paris Descartes, Laboratoire Psychologie de la Perception, University of Paris V, CNRS, Laboratoire Psychologie de la Perception

Many studies have shown a consonant bias (C-bias) in processing speech at the lexical level, as reflected with adults and infants from 12 months up giving more weight to consonants over vowels in processing words. To study the emergence of the C-bias, we used HPP to explore how infants process consonant and vowel mispronunciations of segmented word forms. Familiarized with sentences containing two target words, infants were then tested on repetitions of consonantal versus vocalic changes of both the target words. At 8 months, infants oriented longer to the vowel mispronunciations than consonant mispronunciations ($p < .001$) suggesting a C-bias. However, at 6 months, infants oriented longer to the consonant mispronunciations ($p < .001$) suggesting a vowel bias. The present study thus establishes a switch from a vowel to a consonant bias between 6 and 8 months of age, suggesting that its acquisition is related to phonological acquisition.

Session B--Terrace Lounge

Early child L2 acquisition: Age or input effects? Neither, or both?

Sharon Unsworth, Radboud University Nijmegene

While most studies on the role of age of onset in L2 acquisition compare L2 children with L2 adults, recent attention has turned to exploring age effects within childhood. More specifically, it has been suggested that for some aspects of morphosyntax, child L2 acquisition with age of onset at 4 years and older is fundamentally different from the acquisition of two languages before this age (e.g., Meisel, 2009; Sopata 2010). Age of onset is however a macrovariable (Flege, 2009); it interacts with other factors, such as amount of input (Unsworth, et al., 2014), and amount of input in turn affects rate of acquisition of morphosyntax and vocabulary (Blom, 2010; Gathercole & Thomas, 2009). This paper attempts to disentangle the role of age and input in child L2 Dutch by examining three linguistic properties which these two factors are predicted to affect differently: vocabulary, verb morphology/placement, and scrambling.

Session C--Conference Auditorium

Explaining Children's Wh-In Situ Questions: Against Economy

Misha Becker, University of North Carolina - Chapel Hill
Megan Gotowski, University of California - Los Angeles, University of North Carolina at Chapel Hill

Children acquiring French have been reported to produce more wh-in situ questions than adults do, where both in-situ and fronted forms occur in their input. One explanation for this asymmetry is that in-situ forms are more "economical" (Zuckerman & Hulk 2001, Hamann 2006). We argue against this analysis: wh-in-situ is not more economical as it involves LF-movement, developmental data show that fronted questions appear first and wh-in-situ production increases over time, and wh-in-situ is produced past the RI stage. We claim instead that French-speaking children correctly analyze these forms as a grammatical option for information-seeking (non-echoic) questions in their language. Their overproduction of wh-in situ stems from discourse properties of these forms, namely being "new" topics (Mathieu 2004). We argue that at this stage, children have not yet learned when a syntactic mechanism (fronting) is required to foreground an NP.

Notes

Session A--Metcalf Small

Communicative status underlies the speech advantage in infants' abstract rule learning

Brock Ferguson, Northwestern University
Casey Lew-Williams, Princeton University

At seven months, infants learn abstract rules (e.g., ABB versus ABA sequences) from speech that they cannot learn from other auditory stimuli (e.g., tones). Here we demonstrate that this "speech advantage" may be driven by infants' attention to communicative signals. In Experiment 1, 7-month-olds who were led to believe that tones were a novel communicative signal subsequently learned rules from tones; infants who were merely familiarized to tones did not. In Experiment 2, infants who were exposed to communicative tones were able to generalize their learned rules from tones to speech, mirroring prior work in which infants generalized rules in the reverse direction from speech to tones. We interpret these findings as evidence that infants' rule learning flexibly adapts to privilege relevant (here, communicative) signals in their environments.

Session B--Terrace Lounge

The Linguistic Proximity Model: The case of Verb-Second revisited

Roksolana Mykhaylyk, University of Tromso
Natalia Mitrofanova, UiT The Arctic University of Norway, University of Tromso
Yulia Rodina, University of Oslo
Marit Westergaard, University of Tromso

This study investigates cross-linguistic influence in multilingual (Ln) acquisition of two English structures (i.e., Adv-V word order and Subject-Auxiliary inversion (residual Verb-Second, V2) by bilingual Norwegian-Russian adolescents. We propose the Linguistic Proximity Model (LPM) that explains the Ln learning: transfer occurs when a certain linguistic property receives strong supporting input from the involved languages, regardless of the order of acquisition (L1 or L2) or their general typological grouping. The LPM predicts that Russian syntactic properties will help children learn English Adv-V word order and overcome Norwegian V2 influence. In order to verify these predictions, we tested three groups of 12-13-year-old English learners: L1 Norwegian (N=33), L1 Russian (N=25), and 2L1 Norwegian-Russian (N=12), matched for general English proficiency. The data suggest that while L1 Norwegian children over-accept ungrammatical sentences in English with Norwegian word order (V-Adv), the bilingual children notice these errors more often due to the facilitating influence of Russian.

Notes

Session C--Conference Auditorium

Acquisition of the Korean reflexive pronouns in intra-sentential binding and extra-sentential binding

Kum-Jeong Joo, University of Hawai'i - Manoa
Kamil Deen, University of Hawai'i - Manoa
William O'Grady, University of Hawai'i - Manoa

This study investigates the ability of Korean children to distinguish between the interpretive possibilities of the reflexive pronouns caki-casin (local c-commanding antecedent only) and caki (local antecedent or long-distance antecedent, including a discourse topic). Two truth value judgment experiments were conducted, one to test for the possibility of a local interpretation for each reflexive (26 children aged 5;1 to 6;2, and 30 adult controls) and one to test for the possibility of a non-local interpretation (29 children aged 4;8 to 6;, and 40 adult controls). The results show that the children know the antecedent domains for each reflexive, but that (unlike adults) they prefer a local, intra-sentential antecedent for caki even in contexts that are biased toward a sentence-external discourse topic antecedent. We propose that this preference is best attributed to processing considerations.

Session A--Metcalf Small

Acoustic cues to phonological status in infant-directed speech

Alejandrina Cristia, CNRS, Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS)
Kristine H. Onishi, McGill University
Golnoush Alamian, University of British Columbia
Maarten Versteegh, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS)
Amanda Seidl, Purdue University

At 6-12 months, infants become more sensitive to differences among native phonemes (sounds that are both present in the input and meaningful) and less sensitive to differences among non-native sounds (neither present nor meaningful). A more puzzling problem involves allophonic dimensions, which are present but not meaningful. Combining artificial grammar experiments and analyses of acoustic corpora in two languages, we demonstrate that, while infants may react differently to phonemic and allophonic dimensions early on, they cannot resolve phonological status using acoustic cues alone. Therefore, infants must rely on other sources of information to determine whether a given dimension is phonemic or allophonic in the native language.

Session B--Terrace Lounge

The role of experience in how children discriminate between unfamiliar languages

Christine Potter, University of Wisconsin - Madison
Jenny Saffran, University of Wisconsin - Madison

In multilingual environments, children must determine which individuals speak the same language, and which are speaking different languages. To date, the factors influencing language discrimination are not well understood. In the current studies, we explore children's ability to discriminate between unfamiliar languages, focusing on the role of exposure: does experience with a novel language attune children's attention to differences amongst other unfamiliar languages? After an initial exposure period (during which children heard a familiar language, an unfamiliar language, or music), children performed an ABX discrimination task involving two unfamiliar languages. Across experiments, we manipulated the difficulty of the discrimination and the relationship between language in the exposure phase and languages used in the ABX task. Our goal was to determine whether materials heard during exposure affected children's subsequent language discrimination, and results suggest that hearing an unfamiliar, unrelated language may help children attend to the relevant features of new languages.

Session C--Conference Auditorium

Comprehension of wh-words in Mandarin-speaking High-functioning Children with Autism Spectrum Disorders

Yi (Esther) Su, Central South University
Lin-Yan Su, Central South University

Mandarin wh-words shenme 'what' and shei 'who' can convey both question readings and statement readings, a distinction of which is subject to prosodic cues (rising intonation vs. level intonation) in ambiguous sentences or is influenced by semantic contexts (e.g., the availability of downward entailing contexts) in unambiguous sentences. This study investigated the interpretation of wh-words in Mandarin-speaking high-functioning children with autism spectrum disorders (ASD), as a comparison to typically-developing (TD) children. The experimental findings demonstrated children with ASD's relative strengths in understanding these linguistic properties specific to the interpretation of the Mandarin wh-words, though a complete capture of this knowledge is subject to a developmental effect. Moreover, the data indicate that knowledge of grammatical prosody and the semantic context of downward entailment may be relatively spared in (some) children with ASD. We ascribe our findings to the possible contribution the language faculty makes to language acquisition in the ASD population.

Notes

Session A--Metcalf Small

Meaning Specificity in One-Year-Olds' Word Comprehension

Elika Bergelson, University of Rochester
Richard Aslin, University of Rochester

While we know that around age one infants have precise expectations about the sounds of known words, infants' expectations about the range of meanings of known words is largely unexplored, with evidence for both under- and over- extension across early development. We investigate the specificity of word meanings in 12-14 and 18-20-month-olds, asking how word comprehension varies as a function of semantic fit between labels and words, and how this may change in the presence of novel words and objects. We find that while both 18-20 and 12-14-month-olds understand common nouns, the specificity of their word-meaning linkages varies. Just as one-year-olds know "tog" is a bad way to say "dog", 18-20-month-olds know "sock" is a worse label for foot than "foot" is, but 12-14-month-olds may not. These results suggest that infants consider visual similarity and semantic relatedness among known words, and that meaning specificity narrows between 12 and 18 months.

Session B--Terrace Lounge

Picking up after sloppy children: What pronouns reveal about children's analysis of English comparative constructions

Vera Gor, Rutgers University
Kristen Syrett, Rutgers University

We investigate children's and adults' knowledge of structural principles of comparatives in an experiment combining Truth Value Judgment and Act-Out Tasks. While children may correctly interpret object and subject comparatives, they diverge from adults in their interpretation of the elided material. In each scenario, two equally-salient same-gender characters served as potential antecedents for the pronoun in a target sentence, as in (1).

(1) She*i/j gave more cones to Winnie-the-Pooh than λd.[she gave d-many cones] to Sleeping Beauty's godmother.

Theoretical accounts predict that the pronoun in the elided clause should be the same as the pronominal subject, and since the pronominal subject c-commands the referring expression, they cannot co-refer. Surprisingly, children violate both constraints, and adults violate the latter. We argue that children reconstruct the elided material, but do not require that pronouns be strictly referential. Instead, they may interpret the pronouns as functions that give rise to definite descriptions (E-type pronouns).

Notes

Session C--Conference Auditorium

Real-time processing of classifier information by L2 speakers of Chinese

Elaine Lau, University of Hawai'i - Manoa
Theres Gruter, University of Hawai'i - Manoa

Native speakers use morphosyntactic information on prenominal modifiers to predict upcoming nouns during online comprehension, an ability that has been shown to be weakened, and potentially modulated by proficiency, in non-native speakers. This study investigates whether adult L2 learners of Chinese make incremental use of semantically based information on prenominal classifiers, a property of Chinese known to be difficult for L2 learners, during online comprehension. Results from a visual world eye-tracking study suggest that both native and non-native speakers of Chinese are able to exploit the semantic association between classifier and noun predictively, although effects in the L2 group (n=20) were somewhat weaker and delayed compared to those in the L1 group (n=19), and they were modulated by L2 proficiency as measured by a cloze test.

Session A--Metcalf Small

Frequency, imageability and form class in word acquisition

Filip Smolík, Academy of Sciences of the Czech Republic

The paper examines the effects of imageability and other factors on the acquisition of lexicon. The key question is whether imageability is related to the age at which a word is acquired, and whether the effects interact with other variables. Two different data sources were used; Study 1 was based on the corpus data from the Manchester corpus. Effects of imageability, input frequency, and form class were used as predictors. Analyses revealed that words with higher imageability are acquired earlier, even after accounting for their higher frequency. The effects appeared to be weaker in verbs. Study 2 used parent report data from the Czech MAB-CDI adaptation study. Significant effects of imageability, freuqncy and form class were found, with no interactions. Overall, imageability is shown to affect word acquisition above and beyond the effect of frequency. It is not clear whether the effect is different or similar in nouns and verbs.

Session B--Terrace Lounge

Beyond production: Searching for absolute and relative interpretations of superlatives

Lyn Tieu, Ecole Normale Supérieure
Zheng Shen, University of Connecticut - Storrs

In this study, we investigate children's comprehension of adjectival superlatives. Sentences such as 'Jill painted the biggest sculpture by Jack' can be three-ways ambiguous, cross-linguistically: (i) "absolute" reading: Jill painted the biggest of all the sculptures produced by Jack; (ii) "relative reading with NP-external focus": of all the painters who painted sculptures by Jack, it was Jill who painted the biggest one; (iii) "relative reading with NP-internal focus": of all the sculptures that Jill painted, the biggest one was produced by Jack. While (i) and (ii) are universally available, (iii) is available only in article-less languages (Pancheva & Tomaszewicz 2012). We first present corpus data showing that superlatives in child and caregiver production are restricted to absolute meanings. We then present the results of two experiments, which reveal that while English-speaking adults disallow (iii) and prefer (i) over (ii), 4-5-year-old children primarily access absolute meanings, rather than either relative reading.

Session C--Conference Auditorium

The role of varied input in the divergent outcomes of heritage language acquisition

Abdulkafi Albirini, Utah State University

The present study examined the role of input in the varying outcomes of heritage/first language acquisition by heritage Arab children in the United States. These children display notable variability in their L1 attainment depending on the age of their exposure or shift to English. This paper reports on a cross-sectional study involving three groups of heritage children (age = 5-6;1) with varying ages and degrees of exposure to Arabic (L1) and English (L2). The children were compared to age-matched controls. Three linguistic areas were examined: subject-verb agreement, adjective-noun agreement, and subject and object relative clauses. The findings indicate that the effects of varied input are not uniform across different linguistic forms. For example, the four groups converged on linguistic forms that are unmarked and easy to process, whereas they diverged considerably on forms that are marked and characterized by processing difficulty. The findings will be examined in the light of existing accounts of heritage language attainment, and a new account will be proposed.

Notes

Session A--Metcalf Small

The acquisition of verbal negation: early comprehension and the emergence of a combinatorial language of thought

Roman Feiman, Harvard University
Shilpa Mody, Harvard University
Susan Carey, Harvard University
Jesse Snedeker, Harvard University

Logical linguistic connectives like "not" have meaning, not through reference to the world, but by applying a consistent function to the meanings of the concepts and propositions they combine with. Learning the word requires representing that function, which in turn requires having some combinatorial system of thought. In Experiment 1, we use an offline measure (a disjunctive syllogism task) to hone in on the age at which children understand negation. In Experiments 2 and 3, we look at children's online processing of negation in a preferential looking paradigm, revealing some of the challenges involved in constructing an understanding of negated information. Together these studies provide strong converging evidence that children begin to comprehend truth-functional negation early in the third year. This may be the age at which children generally begin learning words that derive meaning from their combinatorial function, providing evidence for the emergence of a propositional format of thought.

Session B--Terrace Lounge

Question-Answer (In)Congruence in the Acquisition of Only

Martin Hackl, Massachusetts Institute of Technology
Ayaka Sugawara, Massachusetts Institute of Technology
Ken Wexler, Massachusetts Institute of Technology

There is a long-standing puzzle in acquisition of only since Crain et al. (1994): children up to age 6 display difficulties understanding sentences with pre-subject only ("subject-only", e.g. Only the cat is holding a flag.) while having no difficulty understanding sentences with pre-VP only ("VP-only", e.g. The cat is only holding a flag.). We note that neither "subject-only" nor "VP-only" are congruent with a broad question (e.g. What happened?), which is typically used to prompt puppet's answers in experiments in the literature. Instead, they are congruent with different sub-questions, which we hypothesize that listeners must accommodate during comprehension. Our experiments compare children's adult-like responses when we use broad questions and their responses when we use sub-questions. The results show that children are sensitive to Question-Answer Congruence (QAC) and support the idea that accommodation of sub-questions of What happened? plays a role in Crain's puzzle.

Notes

Session C--Conference Auditorium

The Superset Bias in Second Language Acquisition: A study on Early L2 Japanese

Megan Smith, Michigan State University
Bill VanPatten, Michigan State University

The Superset Bias (Boeckx, 2011) proposes that children learning their L1 assume that all instances of a category in the input will be uniform unless or until they receive input to the contrary; that is, they assume rigid parameters. We directly test this with naïve monolingual L1 English speakers with no knowledge of Japanese. Across two studies, 119 participants completed a 100-sentence Japanese input treatment task consisting only of SOV word orders. Afterwards, they received a surprise meaning-focused reading task on basic word order (SOV and ungrammatical *SVO). In order to see whether participants extended head-final word order to novel structures, they were also tested on grammatical and ungrammatical versions of polar questions and embedded clauses. Results indicated that all participants showed sensitivity to ungrammatical basic word order, and that a majority of participants extended head-final word order to polar questions, while about half did so for embedded clauses.

Session A--Metcalf Small

Segmenting words from real speech - a meta-analysis and public database

Christina Bergmann, Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS)
Alejandrina Cristia, CNRS, Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS)

In the past 20 years, infants' ability to segment words from real continuous speech after short familiarization has been subject to numerous studies. The public body of evidence is not entirely conclusive, as results vary to a great degree. New insights require a systematic and comprehensive overview of all published studies, and a home for experiments that remain unpublished.

InWordDB is a public database of reports on infants' early segmentation abilities. In its current form, InWordDB contains 174 effect sizes from as many experiments testing 3,967 infants, reported in 40 journal articles and 11 other sources. A meta-analysis collapsing across 7 languages with infants aged 6 to 14 months reveals an overall robust segmentation effect ($g = 0.2$, $SE = 0.02$, $p < .001$). This resource opens up new research avenues to investigate which factors influence infants' segmentation abilities.

Session B--Terrace Lounge

The impact of pronoun type and grammatical skills on child processing of object relative clauses

Yair Haendler, University of Potsdam
Reinhold Kliegl, University of Potsdam
Flavia Adani, University of Potsdam

Friedmann, Belletti & Rizzi (2009) propose an intervention-based account of relative clause acquisition, predicting facilitated comprehension of object relatives (OR) in which the embedded subject is a pronoun, rather than a full DP. In a visual-world study, we measured eye-gazes and response accuracy to test German-speaking 5-year-olds' comprehension of ORs with two full DPs ('What color is the bunny that the cow chases?') and ORs with a first- or third-person pronominal subject ('What color is the bunny that I/it chase/s?'). The first-, but not the third-person pronoun, facilitated comprehension, as compared to the two-DP condition. These differences between the conditions were more emphasized in children who scored higher on a grammatical test, as evinced by their eye-gazes. We propose to integrate into the intervention-based approach the way the various referring expressions establish reference. Thus, both syntactic and discourse properties, modulated by children's grammatical skills, combine to determine child OR processing.

Session C--Conference Auditorium

Learning how to create a coherent ASL story: Insights from Native vs L2 Learners

Anne Therese Frederiksen, University of California - San Diego
Rachel I. Mayberry, University of California - San Diego

Spoken L2 learners tend to use overly specific reference forms when talking about given entities. We expected to find this pattern in signed L2 ASL, too, despite modality differences. To test this we elicited short ASL narratives by native and L2 signers. We identified person/object references and determined their type (nominal/pronoun/zero anaphor/classifier) and discourse status. The distribution of referential expressions within discourse status differed between the groups. This was due to differences in reintroducing discourse entities, where the L2s used more references than the native signers. Analyses of referential expression within each discourse status revealed that native and L2 signers used different linguistic forms in maintenance contexts. Specifically, the native signers used more classifiers. These results suggest that creating coherence in sign poses unique challenges for L2 learners because this process relies on linguistic forms and discourse structure outside the broad noun/pronoun/zero distinctions generally employed within studies of spoken reference.

Notes

Session A--Metcalf Small

18-month-olds compensate for a phonological alternation

Adam Chong, University of California - Los Angeles
Megha Sundara, University of California - Los Angeles

In American English, word-final /t/ can occur as a tap when followed by an unstressed vowel-initial word. Using the intermodal preferential looking paradigm with eyetracking, we tested whether adult controls and English-learning 18-month-olds treat words produced with stop and tap forms equivalently. Subjects were shown pairs of images - one familiar, one unfamiliar - where the familiar object was labeled auditorily with the following: a canonical stop or a regular tap variant in the appropriate context, a one-feature mispronunciation or a phonologically dissimilar label. Adults treated both stop and tap forms equivalently as labels for a target, yet differently from a mispronunciation. Preliminary data from 18-month-old infants show the same pattern. These results suggest that 18-month-olds can map multiple variant surface forms produced in an appropriate context to visual referents from the onset of word learning.

Session B--Terrace Lounge

On the relation between implicit and explicit measures of child language development: Evidence from relative clause processing in 4-year-olds

Flavia Adani, University of Potsdam
Tom Fritzsche, University of Potsdam

Restrictive relative clauses (RCs) with two full NPs as verb arguments are difficult for 5-year-olds, when tested with an explicit task, e.g. picture pointing. However, on-line sentence processing research showed that 3-year-olds are sensitive to syntactic information, when tested with an implicit measure. We designed a looking-while-listening eyetracking experiment to compare implicit and explicit measures of RC comprehension in German.

Four-year-old's eyetracking data reveal a subject RC parsing advantage, as found in older children and adults. Nevertheless, 4-year-olds appear to discriminate between the potential referents (target vs. distractor) of the RC head noun in both subject and object RCs. In contrast to the pointing results where children perform poorly, the eyetracking data reveal an early comprehension of object RCs. These results indicate that children as young as four years are able to apply restrictions on referent set members and to process argument structural relations in relativized sentential contexts.

Notes

Session C--Conference Auditorium

Neural language processing in adolescent first-language learners: Case studies in American Sign Language

Rachel I. Mayberry, University of California - San Diego
Tristan Davenport, University of California - San Diego
Naja Ferjan Ramirez, University of Washington
Matthew Leonard, University of California, San Francisco
Eric Halgren, University of California - San Diego

Session A--Metcalf Small

Pointing and Eyegaze in Bimodal Bilingual Language Development

Kadir Gokgoz, University of Connecticut - Storrs
Ronice Müller de Quadros, Universidade Federal de Santa Catarina
Janine Oliveira, Universidade Federal de Santa Catarina
Diane Lillo-Martin, University of Connecticut - Storrs

We report two findings on pointing by Bimodal Bilingual (Bibi) children and their interlocutors. First, along with Petitto (1987), we found that signing children avoid the use of first and second person pronouns until age 2;06 and later. Second, we found that the Bibi children used gaze to the addressee more than the hearing children reported in Lieberman et al. (2014), but less in speech target sessions than in sign target sessions. Our study has implications for the analysis of pointing as a linguistic device: if pointing and eye-gaze as a component of it were (entirely) gestural, it would come as a surprise to find the patterns we observed in speech sessions of Bibis compared to speech sessions of monolingual-speaking children. We attribute these to the unique nature of bimodal bilingualism, which permits an enhancement of language 'synthesis' (Lillo-Martin et al. 2010).

Session B--Terrace Lounge

Perceptual Characteristics of Spontaneous Speech in High Functioning Autism: Are We Discriminating Listeners?

Mary Andrianopoulos, University of Massachusetts - Amherst
Elena Zaretsky, Clark University
Carlene McGuigan, University of Massachusetts - Amherst, University of Rhode Island
Rachel Warshaw, University of Massachusetts - Amherst

This study identified perceptual differences across acoustic and linguistic parameters in narratives of children with High Functioning Autism (HFA) and age- and gender-matched typically developing (TD) peers. Trained cohorts of 20 (Speech Language Pathologists, SLP) and 20 non-SLP judges participated as "listeners" and applied a set of criteria to identify the perceptual and linguistic characteristics of narratives collected from 24 children with HFA and 24 TD peers. Judges rated random samples of 20 narratives (10 HFA and 10 TD) on seven linguistic (story sequencing, topic organization, story details, pronominal references, causal language, use of elaborations, ToM) and six speech/acoustic (articulation, fluency, intonation, rate, pitch, and loudness) variables. Inter-rater reliability was strong. Repeated measure ANOVAs for main effect of diagnosis supports that across linguistic parameters only temporal aspects of the narratives (sequencing) events discriminated between HFA and TDs. Across speech/acoustic parameters, significant differences in articulation, fluency and rate discriminated HFA narratives.

Session C--Conference Auditorium

Abstract Representation of Feature Agreement across Grammatical Categories in Infants

Andréane Melançon, University of Quebec - Montreal
Rushen Shi, University of Quebec - Montreal

We examined infants' abstract representation by using gender feature assignment and agreement across grammatical categories. In a preferential looking procedure, French-learning infants were familiarized with novel nouns in Det+Noun phrases (24-month-olds) or "des"+Adj+Noun phrases (36-month-olds); each noun (with no inherent gender marking) was assigned a gender by the Det/Adj, either masculine or feminine, counterbalanced across infants. In test sentences, the novel nouns appeared in topicalized subject NPs (containing a gender-unmarked Det), followed by gender-marked subject pronouns. The pronoun gender agreed with the noun gender in congruent test trials, but not in incongruent trials. Congruency depended on the noun gender assignment in familiarization. Results showed that infants discriminated congruent and incongruent test trials (24 months: $p<.05$; 36 months: $p<.05$). These findings show that abstract grammatical representation is present and robust in infants; infants track feature agreement across multiple grammatical categories. Impressively, this knowledge applies automatically even when infants encounter novel words.

Notes

Session A--Metcalf Small

Comprehension of Code-Switching by Bilingual 20-Month-olds

Elizabeth Morin-Lessard, Concordia University
Krista Byers-Heinlein, Concordia University
Casey Lew-Williams, Princeton University

Bilingual infants frequently encounter code switching from their bilingual caregivers. We tested the effects of code switching on 20-month-old infants' word comprehension in a preferential looking paradigm. Code switching impaired word recognition when the switch occurred within a sentence (e.g. "Look at the chien!" vs. "Look at the dog!"). However, code switching did not impair word recognition when the switch occurred at a sentence boundary ("Do you see that one? Le chien!" vs. "Do you see that one? The dog!"). The results suggest that some types of code switching challenge young bilingual learners, but switching across a prosodic boundary can mitigate processing difficulties.

Session B--Terrace Lounge

Seeing to hear? Gaze to speaking faces in children with autism spectrum disorders.

Julia Irwin, Haskins Laboratories, Southern Connecticut State University
Lawrence Brancazio, Haskins Laboratories, Southern Connecticut State University
Jacqueline Turcios, Haskins Laboratories, Southern Connecticut State University
Nina Gumkowski, Haskins Laboratories
Jonathan Preston, Haskins Laboratories, Syracuse University

Using eye-tracking methodology, gaze to a speaking face was compared in a group of children with autism spectrum disorders (ASD) and those with typical development (TD). Patterns of gaze were observed under three conditions: audiovisual (AV) speech in auditory noise, visual only speech and an AV non-face, non-speech control. Children with ASD looked less to the face of the speaker and fixated less on the speakers' mouth than TD controls. No differences in gaze were reported for the non-face, non-speech control task. Since the mouth holds much of the articulatory information available on the face, these findings suggest that children with ASD may have reduced access to critical linguistic information. This reduced access to visible articulatory information could be a contributor to the communication and language problems exhibited by children with ASD.

Notes

Session C--Conference Auditorium

Does negative feedback have an effect on language acquisition?

Elena Kulinich, University of Montreal, The Centre for Research on Brain, Language and Music (CRBLM)
Phaedra Royle, University of Montreal, The Centre for Research on Brain, Language and Music (CRBLM)
Daniel Valois, University of Montreal, The Centre for Research on Brain, Language and Music (CRBLM)

POS argument and nativism have recently been challenged. Some have shown that children may benefit from contrastive negative feedback (e.g., Saxton 1997). In order to assess the lasting effect of negative feedback we conducted a series of elicited tasks with 35 Russian speaking children aged 3 to 4 years old. 12 verbs which undergo overregularization in the non-past tense were used. The experiment was repeated during 4 sessions with bi-weekly and monthly intervals between sessions. Four groups were formed with three types of negative feedback, and a control group without feedback. No differences were found between groups ($p > 0.1$): all performed better from task to task ($p < 0.001$). We do not observe any significant difference between effects of negative feedback type, or even no feedback. This finding supports the general hypothesis that feedback is not a strong driver of language acquisition.

Session A--Metcalf Small

Parsing strategies in code-switched relative clause constructions: an eye-tracking study

Elena Valenzuela, University of Ottawa
Tania Zamuner, University of Ottawa
Rachel Klassen, University of Ottawa
Kristina Borg, University of Ottawa

Session B--Terrace Lounge

Maternal responsiveness to child gesture facilitates word learning in children with autism and Down syndrome

Nevena Dimitrova, Georgia State University
Seyda Ozcaliskan, Georgia State University
Lauren B. Adamson, Lauren B. Adamson

Typically-developing (TD) children frequently refer to objects uniquely in gesture. Parents translate these gestures into words, facilitating children's acquisition of these words (Goldin-Meadow et al., 2007). We ask whether this pattern holds for children with autism spectrum disorder (ASD) and with Down syndrome (DS) who show delayed vocabulary development. We observed 23 children with ASD (from 31 to 43 months), 23 with DS (from 30 to 43 months), and 23 TD children (from 18 to 30 months), interacting with their parents over a year. Children used gestures to refer to objects that they have not yet labeled in speech, and parents translated their gestures into words. Importantly, children benefited from this targeted input, producing words for the translated gestures significantly more often than the ones that were not translated. Our results highlight the important role contingent parental input to child gesture plays in language development of children with developmental disorders.

Session C--Conference Auditorium

Cue reliability in the acquisition of Japanese case markers

Akira Omaki, Johns Hopkins University
Tessei Kobayashi, NTT Communication Science Laboratories
Jeffrey Lidz, University of Maryland - College Park

Case markers in languages like Japanese indicate the grammatical functions of nouns, and are known to aid infants' learning of verb argument structure. However, an important question remains: how and when do infants learn case markers in the first place? Japanese has several case markers that vary in syntactic and semantic properties, which are not obvious from the input distribution, as the surrounding content words may be unknown to infants or omitted from the sentence. To address this, our noun learning experiment with Japanese 16-, 19- and 27-month-olds probed their knowledge of accusative case marker "-o" and instrument marker "-de". Preferential-looking results show that 27-month-olds correctly distinguish accusative and instrument markers, 16-month-olds fail to distinguish the two, and 19-month-olds treat both as instrument markers. We suggest that the frequent omission of accusative case markers in child-directed speech led 19-month-olds to misclassify the optional accusative case marker as an obligatory postposition.

Notes

KEYNOTE ADDRESS

From sounds to words to grammatical categories: The role of distributional learning

Richard Aslin
University of Rochester

Language learning requires exposure to the distributional properties of linguistic input, but that input has been characterized as both impoverished (sparse) and open to multiple interpretations (ambiguous). How does a naive learner, such as an infant, make sense of this input and build a generative model of their native language? I will address these questions by reviewing how an "ideal learner" would solve the problems of sparsity and ambiguity in the domains of phonetic category learning, lexical learning, and grammatical category learning. I will then compare the predictions of this ideal learner with what we currently know about how infants, children, and adults perform on tasks within each of these domains. My overall perspective emphasizes a parallel and interactive learning mechanism that operates effectively and efficiently only if implicitly guided by a variety of domain-general and language-specific constraints.

Notes

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POSTER SESSION I

Implicit alternatives insufficient for children's SIs with some

Athulya Aravind, Massachusetts Institute of Technology
Jill de Villiers, Smith College

Several studies show that children often fail to compute scalar-implicatures involving "some", a difficulty sometimes attributed to their failures representing "all" as a scale-mate of "some" (e.g., Barner et al. 2011). On the other hand, even 4-year-olds are able to make inferences based on contextually-derived implicatures (Stiller et al. 2014). We asked whether SI-generation becomes easier if the alternative interpretation (e.g., all) is pictured in the context and thus made salient. Two relevant "some"-SI items were included as part of a large, longitudinal study on various aspects of cognitive-development. Children saw panels of 4 sets, in which "some", "all", "none", or "some-part" of the objects had a relevant property. They had to point to the set where e.g., "Some cars are red". We found that the contextually-salient alternative did not help: while 4-year-olds know the logical meaning of some, they failed to consistently choose the target-set (some) until age 6.

POSTER SESSION I

How do children parse naturalistic input? A new methodology

Sudha Arunachalam, Boston University

We present a new method for studying children's parsing of naturalistic input from their parent. The child sits with a parent in front of a tablet computer equipped with a small eye-tracker (Tobii X2-30). The parent is asked to "read" a digital picture book to the child. The child's eye gaze is recorded and analyzed to provide online measures of how they parse their parent's utterances. The goal of this research program is to discover what referential expressions parents use to describe objects in naturalistic situations, and to see how successfully children identify the referents of those expressions in real-time.

POSTER SESSION I

The role of function words and prosody for phrasal parsing in preverbal infants

Mireille Babineau, University of Quebec - Montreal
Rushen Shi, University of Quebec - Montreal
Andréane Melançon, University of Quebec - Montreal

We examined whether infants use function words for phrasal parsing and how functors and prosody interact for parsing. In a preferential looking procedure French-learning 11-month-olds were familiarized with sentences of the subject-NP+VP structure. The VP began with a functor (va, "will") in half of the sentences and a nonsense-functor (ko) in the other half. In Experiment 1, the subject-NPs contained phrase-final prosodic cues. Infants were then tested with the subject-NP spliced from the "va" versus from the "ko" sentences. In Experiment 2 we re-created the familiarization sentences by removing all phrase-final prosodic cues of the subject-NPs using cross-splicing, i.e., the NPs ended with phrase-internal prosody. Infants were tested with the subject-NPs spliced from those "va" versus "ko" sentences. Results showed that the functor assisted NP segmentation. At 11 months, infants use functors to parse phrases, even when phrase-final prosody is absent. The findings demonstrate that functors help bootstrap early language.

Notes

POSTER SESSION I

Children's generalization of novel phonotactics at the syllable level

Amélie Bernard, McGill University
Lara Feldman, McGill University
Kristine H. Onishi, McGill University

Five-year-olds were familiarized with word-medial phonotactics that could be represented at the syllable level (e.g., P/Z as syllable onsets, F/D as syllable codas), the level of local co-occurrence patterns (e.g., F always co-occurs with P, D always with Z), or both. In test, children heard novel nonwords and, for each, decided whether it had been heard earlier in the experiment or not. Like adults, 5-year-olds had higher false recognition for novel items with restricted consonants in the same rather than different syllable positions (e.g., kiFPeb vs. kiPFeb; Experiment 1). In contrast, unlike adults, 5-year-olds responded similarly to items with the restricted consonants in the same rather than different syllable positions (e.g., kiFPeb vs. kiPFeb; Experiment 2). Thus, children's spontaneous learning of novel phonotactic patterns seems to occur at the level of the syllable, and can be abstracted to novel word positions, demonstrating continuity in phonological representations in children and adults.

POSTER SESSION I

9- and 12-month-olds fail to perceive infant-directed-speech in an ecologically valid multi-talker background

Dana Bernier, University of Manitoba
Melanie Soderstrom, University of Manitoba

Little is known about infants' ability to deal with situations where multiple people are speaking simultaneously. Previous research has shown that while age of the infant and intensity of the background matter, so does the number of background speakers. The read-aloud multi-talker speech used in previous studies is perceptually different from conversational speech typically encountered by infants. To test the generalizability of these findings, this study used a background of ecologically valid multi-talker speech. Using the head-turn preference procedure, infants were presented with passages of background noise with and without target infant-directed speech at a 10 dB SNR. Results show that while 9-month-olds prefer passages containing target sentences with a white noise background, both 9- and 12-month-olds failed to show a preference with a multi-talker background. Current follow-up studies suggest that both 9- and 12-month-olds do however show a preference when the target speech is their own name.

Notes

POSTER SESSION I

Coordination of linguistic and cognitive processes during reading development

Ariel Borten, University of Maryland - College Park
Yi Ting Huang, University of Maryland - College Park

Reading abilities involve the efficient cascade of multiple processes (e.g., visual, orthographic, phonological analysis) that have been well-studied in adults who have mastered reading. However, far less is known about how these processes unfold in populations in the early stages of learning. The current study paired an eye-tracking paradigm with a RAN task to examine whether incremental processing exists in novice 6-year-old readers. Manipulation of display items varied the demands associated with encoding (orthographic similarity) or post-encoding, articulation (syllable length). Children, like adults, produced longer vocalization times for items with more syllables. Both groups also generated increased latency to speak for initial items ("p") of an orthographically similar pair ("q"). Critically, this preview effect suggests that the cognitive architecture for incremental processing requires minimal experience and is present at the earliest stages of reading development. Nevertheless, unlike adults, children also exhibited spill-over effects, suggesting developmental differences in inhibiting competing representations.

POSTER SESSION I

The semantic garden path effect: Young children's abandonment of semantic expectations

K. Michael Brooks, Northwestern University
Casey Lew-Williams, Princeton University

Children's processing of incoming speech builds representations of what the signal is and what it will be. When sentences end in semantically unexpected ways, there is a conflict between the expectation and the actual signal. In a looking-while-listening paradigm, we show that when this occurs, 3-year-olds reevaluate their expectations in favor of adherence to the incoming signal. From one perspective, children could be seen as blind followers of each incoming word, listening strictly to the content of the auditory signal. However, these results also reveal an efficient processing strategy: children's expectations are flexible, allowing them to keep up with the fast pace, occasional imprecision, and frequent novelty of caregivers' utterances.

POSTER SESSION I

Are rare constructions late in acquisition? The case of near-reflexivity

Valentina Brunetto, University of Massachusetts - Amherst
Tom Roeper, University of Massachusetts - Amherst

This study investigates children's interpretation of reflexives in contexts where the relation between antecedent and anaphor is not one of strict identity. In statue-contexts, for example, it is licit to say "Ringo Starr walked into the wax museum and kicked himself", assigning the reflexive a different referent from the one denoted by its antecedent. We show that near-reflexivity is not a case of lexical ambiguity, but a complex interface phenomenon. We designed ten stories manipulating two variables: (i) the pragmatic context (inviting a choice between either the real person and his statue, or between two statues) and (ii) the morphological richness of the reflexive (bi- vs. mono-morphemic/null). Data show that, despite being extremely rare in the input, near-reflexivity is understood very early and is UG-constrained, i.e. blocked with inherent reflexive verbs. However, the pragmatics of the phenomenon is mastered late, leading to overacceptance of statue readings in younger children.

POSTER SESSION I

Evidence for a speed-accuracy trade-off in bilinguals: A diffusion model approach to the Attention Network Task

Joseph M. Burling, University of Houston
Crystal D. Tran, University of Houston
Hanako Yoshida, University of Houston

Exposure to two or more languages during development has been suggested to have long-lasting effects on cognition, particularly for executive functions. The mechanisms proposed in the literature typically involve continuous switching and inhibition of competing languages, and are suggested to extend to other cognitive domains. Our proposed research indicates that monolinguals and bilinguals differ in regards to speed and accuracy when tested on the Attention Network Task. Typical analyses of response time and accuracy measures indicate no difference between groups, however accuracy was worse for monolinguals. Next, we deconstructed responses into separate cognitive components using a Bayesian hierarchical diffusion model to investigate how bilinguals vary in terms of motor latency, processing time, and initial biases. The model predicted a speed-accuracy trade-off between groups, with bilinguals showing slower responses but with significant improvements in accuracy. These results bring into question the exact role bilingualism plays in shaping general attention.

Notes

POSTER SESSION I

Monolingual and bilingual infants' attention to talking faces from 5-26 months

Krista Byers-Heinlein, Concordia University
Elizabeth Morin-Lessard, Concordia University
Diane Poulin-Dubois, Concordia University
Segalowitz Norman, Concordia University

Talking faces provide redundant audio-visual information about language. Previous research has reported that infants decrease their attention to the eyes compared to the mouth of a talking face from 4-10 months, and shift attention back towards the eyes at 12 months if the interlocutor speaks the native language (Lewkowicz & Hansen-Tift, 2012). To better understand the role of language expertise in audio-visual speech perception, we tested infants in a wider age range (5-26 months) and compared monolinguals and bilinguals. Each infant watched three videos of native and non-native language speakers. Across the first two years, monolinguals and bilinguals increased their attention to the mouth. Contrary to previous findings, no difference between native and non-native language was found at 12 months. This raises the possibility that infants' attention to different parts of a talking face is related to growing experience with language in general, but not expertise in a particular language.

POSTER SESSION I

Lexical Comprehension in 6-Month-Olds

Jennifer Campbell, University of British Columbia
D. Geoffrey Hall, University of British Columbia

By six months of age, infants begin to comprehend common nouns (Bergelson & Swingley, 2012; Tincoff & Jusczyk, 2012) and proper names (Tincoff & Jusczyk, 1999). Although previous findings are consistent with the possibility that 6-month-olds have learned "Mommy" and "Daddy" (or similar labels) as words for particular individuals (proper names), the findings are also consistent with the possibility that infants have learned these labels as words for any familiar woman and any familiar man (common nouns). We found that 6-month-olds associated "Mommy" with their mother, whether she was paired with their father or with their grandmother. These results clarify infants' understanding of proper names by demonstrating that 6-month-olds do not associate "Mommy" with any familiar woman. Our findings also suggest that the scope of 6-month-olds' lexical comprehension is wider than previously documented, including labels for multiple familiar figures from the same gender category (i.e., "Mommy" and "Grandma").

Notes

POSTER SESSION I

Code-Blending in Bimodal Bilingual Development is Constrained

Deborah Chen Pichler, Gallaudet University
Ronice Müller de Quadros, Universidade Federal de Santa Catarina
Diane Lillo-Martin, University of Connecticut - Storrs

We outline constraints on **congruency** and **timing** imposed by the Language Synthesis model (Lillo-Martin et al. 2010), aiming to account for bilingual phenomena including 'transfer', code-switching, and bimodal (sign+speech) code-blending using the same linguistic architecture required for monolingual production (MacSwan 2000, 2005). Here we focus on code-blending, the production of (portions of) a message using both modalities simultaneously (Emmorey et al. 2008). Because code-blended utterances stem from the derivation of a single proposition, we predict code-blended sign and speech will always be at least partially congruent or complementary; mismatching bimodal utterances are predicted not to occur. Likewise, the timing of signed and spoken components of bimodal utterances are predicted to overlap. Analysis of our data revealed no cases of content mismatches in blended utterances, while numerous timing mismatches occurred. We offer an explanation of these timing mismatches as results of immature coordination rather than instances of multiple propositions in sign and speech.

POSTER SESSION I

Morphosyntactic Illusions in Down Syndrome: The Role of Phonetics/Phonology

Christiana Christodoulou, Massachusetts Institute of Technology, University of Cyprus

This study brings together morphosyntactic and phonetic/phonological analyses, which have not informed each other to date, to determine what conditions omissions and substitutions of phonemes, resulting in a change of morphosyntactic features. Effects of omission and substitution of inflectionally (/s/, /n/, /t/) and non-inflectionally relevant phonemes were examined in word-initial, word-medial, and word-final positions for all morphosyntactic features with 16 Cypriot Greek individuals with Down Syndrome, aged 19–45, and 17 Cypriot Greek typically developing children, aged 7–8. Results show that the majority of omissions and substitutions of inflectionally related phonemes are due to phonetic/phonological restrictions rather than morphosyntactic difficulties. Percentages of incorrect use with morphosyntactic features are significantly reduced once phonetic/phonological restrictions are factored out. This is especially evident for /s/ omission with nominative (83% vs. 99.3%). Consistencies with consonant omissions (specific consonants more prone to omission) and substitutions (certain phonemes substitute for certain other phonemes) are observed.

POSTER SESSION I

The role of Theory of Mind in the acquisition of demonstratives: Evidence from child Chinese

Chia-Ying Chu, University of Kansas
Utako Minai, University of Kansas

The present study examined children's comprehension of demonstratives in Mandarin Chinese (zhege 'this' and nage 'that') in relation to their cognitive development. Demonstrative comprehension is context-dependent: zhege ('this') points to the closer object, while nage ('that') points to the further object; crucially, the nearness/farness of the object is determined based on the speaker's perspective. Children often exhibit non-adult-like, egocentric demonstrative comprehension, failing to incorporate the speaker's perspective when it is different from their own (Clark & Sengul, 1978). Recently Chu & Minai (2013) revealed a correlation between English-speaking children's demonstrative comprehension and their performance in a Theory of Mind measurement. Expanding this study cross-linguistically, we translated into Chinese the tasks used in Chu & Minai (2013), and tested sixty Chinese-speaking children. The results replicated the findings with English-speaking children, providing cross-linguistic support for the hypothesis that children's demonstrative comprehension is associated with their development of Theory of Mind.

POSTER SESSION I

Phonetic properties of L2 child directed speech and effects on child language development

Cynthia Core, George Washington University
Erika Hoff, Florida Atlantic University

Notes

POSTER SESSION I

Language for mentalizing: A study of Autism Spectrum Disorders

Stephanie Durrleman, University of Geneva, Institute of Cognitive Science, CNRS, Lyon
Julie Franck, University of Geneva

Studies on ASD have identified links between Theory of Mind (ToM) and knowledge of sentential complements [1,2], however it is still unknown whether the impact of complementation on ToM performance carries over to instances where ToM is assessed nonverbally, and if this impact is privileged as compared to cognitive abilities such as executive functioning (EF) [3]. This study explores the contributory roles of complementation and EF on verbal and nonverbal ToM in children with ASD. The results show that ToM is impaired in ASD as compared to mental-age peers, whether measured verbally or nonverbally, while complements and EF were unimpaired. Partial correlations controlling for IQ show that complementation correlates with verbal ToM in ASD, unlike EF, and crucially that this correlation persists with non-verbal ToM. These findings provide new evidence in favor of the view that mastery of sentential complements plays a privileged role in ToM reasoning in ASD.

POSTER SESSION I

The Emerging Gesture-Speech Relationship in Preschoolers Who Do and Do Not Stutter

Laiah Factor, Indiana University
Lisa Gershkoff-Stowe, Indiana University
Julie Anderson, Indiana University

This study examines the speech-gesture relationship in preschool-aged children who do (CWS) and do not (CWNS) stutter. Children watched a "Tweety and Sylvester" cartoon and immediately narrated the story to a parent who had not seen it. Findings indicated that the temporal onset of speech preceded the onset of gesture in CWNS and CWS for both fluent and disfluent speech. Additional analysis revealed that CWS used significantly more deictic gestures that were semantically synchronous during fluent than disfluent speech, whereas they tended to use iconic gestures that were semantically asynchronous during fluent speech. CWNS used iconic gestures to express asynchronous semantic content in their speech, regardless of fluency. The findings suggest that CWS may employ deictic gestures as a compensatory mechanism to reinforce rather than supplement their spoken message. Together, the findings provide evidence for an extended developmental course involving the integration of gesture into the adult language system.

Notes

POSTER SESSION I

Distributional learning of phoneme categories in bilingual and monolingual infants

Christopher Fennell, University of Ottawa
Corinne Laliberte, University of Ottawa

Distributional learning is proposed to account for infants' refinement of native-language phonemes: phonemes only emerge as discriminable if their respective acoustic-phonetic input distributions have little overlap. However, bilingual infants must refine phonemes in the face of imperfectly overlapping phonetic distributions across their languages and additional distributions compared to monolinguals. Are bilinguals therefore better at tracking distributions, or is this basic, domain-general skill unchanged? We tested monolingual (N = 48) and bilingual (N = 48) 7-month-olds on a 9-step continuum of non-native sounds that formed a unimodal or bimodal distribution (/c/-/ɟ/), or a more complex 11-step continuum that formed a unimodal or trimodal distribution (/c/-/ɟ/-/g/). The four distributions were counter-balanced within groups. All infants failed to discriminate targets after unimodal training. Both groups discriminated /c/-/ɟ/ after bimodal training. Only bilingual infants discriminated the central consonant from a peripheral consonant after trimodal training, demonstrating more adept learning of complex phonetic distributions.

POSTER SESSION I

Person and number asymmetries in child comprehension of Spanish agreement and object clitics

Hannah Forsythe, Michigan State University

Children's comprehension of 3rd-person is delayed relative to 1st- and 2nd-person (e.g. Brener 1983, Girouard et al. 1997). A recent hypothesis proposes that children struggle to calculate Implicated Presuppositions (Sauerland 2008, Legendre et al. 2010) and therefore fail to realize that 3rd-person cannot refer to the speaker or hearer. This hypothesis also predicts that children struggle with the interpretation of plurals. We tested children and adults' interpretation of Spanish subject agreement and object clitics, which inflect for number and person. Children show difficulty with plural relative to singular forms and with 3rd relative to 1st- and 2nd-person forms. However, adults also show surprisingly low performance in 3rd-person conditions, suggesting that there are problems locating an appropriate antecedent. Our results suggest that it is not necessarily Implicated Presuppositions that slows acquisition of 3rd person, but that the difficulty of locating an appropriate antecedent similarly affects both children and adults.

POSTER SESSION I

'Two-pound cookies' or 'two pounds of cookies: Children's appreciation of quantity expressions

Ruthe Foushee, Harvard University
Naoual Falkou, Harvard University
Peggy Li, Harvard University

Two experiments explored children's ability to distinguish attributives ("three-pound strawberries," where MPs as adjectives signal reference to attributes) versus pseudopartitives ("three pounds of strawberries," where MPs combine with "of" to signal part-whole relations). Given the systematic nature of the syntax-semantics mapping, we asked whether children are able to use syntax to interpret how entities are being quantified. In Experiment 1, 4-year-olds heard items described with either an attributive, a pseudopartitive, "each" ("each weighs three pounds"), or "altogether" ("altogether they weigh three pounds"). At test, with some items removed, children were asked whether the same phrase they heard applied to the remaining items (e.g., "Does Dora still have three-pound strawberries?"). Children did not distinguish between attributives vs. pseudopartitives, but did so for "each" vs. "altogether." Experiment 2 extends the age range with a new design. Children heard "each" or "altogether" descriptions (e.g., "each strawberry weighs three pounds."), and judged, at test, which of two characters 'said it better' (i.e. "Mickey says 'these are two pounds of strawberries' but Donald says 'these are two pound strawberries.'"). Children under six were at chance. Together, the two experiments suggest that despite its systematicity, children do not automatically appreciate the mapping between syntax and semantics.

POSTER SESSION I

Wordbank: An Open Repository for Developmental Vocabulary Data

Michael C. Frank, Stanford University
Daniel Yurovsky, Stanford University
Ranjay Krishna, Stanford University
Virginia Marchman, Stanford University

The MacArthur-Bates Communicative Development Inventories are a widely-used family of parent-report instruments for easily and cheaply gathering valid data about early language acquisition. CDI data have been used to explore variation in early word production and vocabulary composition. With few exceptions, however, researchers have had to rely on data collected in their own lab. We present Wordbank, a structured collection of child by item data of vocabulary measures from CDI forms. Our current database contains 2,550 children from 8–30 mos, encompassing the original CDI norming sample as well as other smaller samples. Data on the scale of Wordbank promote the discovery of new insights about vocabulary growth. As a proof of concept, we used semantic network analyses to characterize the micro-structure of children's vocabularies. Adding to resources like CHILDES and CLEX, Wordbank will allow researchers unprecedented levels of detail in their explorations of early vocabulary.

Notes

POSTER SESSION I

4-5 year olds do not attach non-finite adjuncts too low

Juliana Gerard, University of Maryland - College Park
Jeffrey Lidz, University of Maryland - College Park

Previous research has consistently found that children exhibit non-adultlike interpretations of adjunct control into elementary school (Goodluck 1981, Hsu et al. 1985, McDaniel et al. 1991, Wexler 1992, Cairns et al. 1994, Broihier & Wexler 1995, Goodluck 2001, Adler 2006). Attaching the adjunct too low such that the main clause object binds into the adjunct clause has been proposed to account for obligatory object control, which predicts Principle C effects for a pronoun in object position and an R-expression in the adjunct. We tested 4-5 year olds on a TVJT to probe for the availability of a coreferential interpretation between a pronoun in object position and an R-expression in the adjunct, and of a disjoint interpretation for plausible dissent. Adults and children both exhibited similar (high) rates of acceptance and provided justifications. Principle C seems not to influence children's interpretations of the pronoun, arguing against an attachment account.

POSTER SESSION I

Parent-directed language intervention for children of low socioeconomic status (SES)

Eileen Graf, University of Chicago
Kristin Leffel, University of Chicago
Elizabeth Suskind, University of Chicago
Dana Suskind, University of Chicago

Notes

POSTER SESSION I

On-line auditory processing of code-switched sentences by bilingual children

Megan Gross, University of Wisconsin - Madison
Eva Lopez, University of Wisconsin - Madison
Margarita Kaushanskaya, University of Wisconsin - Madison

Code-switching, the alternation of languages within a conversation, sentence or phrase, is often viewed as a sign of sophistication in language production by bilingual adults. However, recent studies have yielded conflicting findings about whether listening to code-switching imposes processing costs on bilingual children. The current study used an auditory moving window paradigm to examine on-line processing of code-switched sentences by typically-developing Spanish-English school-age bilingual children. The sentences were divided into three segments, and children pressed a button to advance after listening to each one. The language of the final segment was manipulated to create four types of sentences: English, Spanish, English-to-Spanish code-switching, and Spanish-to-English code-switching. Reaction times to the final segment were slower for the sentences containing code-switching than for the single-language sentences, suggesting that listening to code-switching carries processing costs. However, the size of these costs may be modulated by the children's language background and their domain-general shifting skills.

POSTER SESSION I

Neural response to spoken words and environmental sounds in toddlers and adults

Kristi Hendrickson, San Diego State University, University of California, San Diego
Matthew Walenski, San Diego State University, University of California, San Diego
Margaret Friend, San Diego State University, University of California, San Diego
Tracy Love, San Diego State University, University of California, San Diego

Our ability to interpret the world crucially depends on how the brain organizes meaningful auditory information. Most research investigating how the auditory-semantic system is organized comes from studies on language, and far less in known about how the brain organizes meaningful auditory information that is not linguistic (e.g. environmental sounds). The current study used ERPs to examine how semantic information for words and environmentalsounds is organized early in life (24-months) and in adulthood. Participants saw pictures (e.g. sheep) with words or sounds at three levels of featural similarity: Match (e.g. "sheep" or bleating), Near Violations (e.g. "cow" or mooing), Far Violations (e.g. "tiger" or roaring). Differences in N400 amplitude indicated that the organization of words and sounds in semantic memory is differentially influenced by featural similarity for adults and potentially toddlers as well. This research has implications for furthering our understanding about the relation between language and cognition.

POSTER SESSION I

Arguments and Events in Second-Generation Homesign

Laura Horton, University of Chicago
Diane Brentari, University of Chicago

We present experimental results from participants with a unique language model: an adult homesign system. The participants are members of a family who live in Guatemala. Luisa (38) is deaf, her daughter Maria (8) is also deaf, and her son Juan (12) is hearing. They use a gestural system at home to communicate. The data are elicited descriptions of single or plural objects that are arranged or placed on a table. Participants' descriptions may include "labels" to identify the objects, "event descriptions" of the movement or arrangement of the object(s), or both. Luisa's responses are different from Maria and Juan, who are more likely to include both a label and an event description. Maria seems to benefit from the gestural input that she receives from her mother and her hearing brother, who integrates his mother's homesign system and his experience with spoken language.

POSTER SESSION I

Understanding difficulties in children's interpretation of passives: A SES comparison

Yi Ting Huang, University of Maryland - College Park
Kathryn Leech, University of Maryland - College Park
Meredith Rowe, Harvard University

SES-related input differences relate to vocabulary development, but their role in syntactic development is less understood. Effects may reflect narrow frequency differences within constructions or broad processing demands during comprehension. This study distinguishes these mechanisms by comparing interpretations of passives in 5-year-olds from lower- and higher-SES families. Fixations revealed rapid disambiguation of passives from actives in children from higher-SES families, but slower sensitivity in those from lower-SES families, on average. This delay generated specific challenges for interpreting passives that required syntactic reanalysis ("The seal is quickly eaten by it") and led to SES differences in subsequent errors. In contrast, children were equally proficient with passives that did not require revision ("It is quickly eaten by the seal"). This suggests that input differences may influence children's real-time sensitivity to informative linguistic cues within utterances. This in turn impacts their ability to effectively reanalyze initial misinterpretations, a critical skill in syntactic development.

Notes

POSTER SESSION I

6-month-olds can segment and decompose morphologically-complex words

Yun Jung Kim, University of California - Los Angeles
Megha Sundara, University of California - Los Angeles

Adults relate forms like *walk*, *walks* and *walking*. This study was designed to determine how and when infants relate morphologically complex forms. For this we tested English-learning 6-month-olds using the Headturn Preference Procedure. First, we showed that 6-month-olds can segment morphologically complex forms (e.g., *babs*) from passages when the word mommy/mama precedes the target words [$t(23) = 2.387$, $p = .026$]. Next, when familiarized with morphologically complex forms with the *–s* suffix in passages (e.g., *babs*), they listened longer to root forms (e.g., *bab*; $t(23) = 2.624$, $p = .015$). However, when familiarized with passages containing a pseudo-complex form with the nonce morpheme *-sh* (e.g., *babsh*), 6-month-olds failed to listen longer to the 'root' forms (e.g., *bab*; $t(23) = -.440$, $p = .664$). These results show that for 6-month-olds morphologically-related root forms are more than part words, highlighting the special status of functional elements early in acquisition.

POSTER SESSION I

Daxing my toy or Daxing TO my toy? Two-year-olds use syntax to override rational imitation effects

Melissa Kline, Massachusetts Institute of Technology
Jesse Snedeker, Harvard University

Verbs may refer to the means (I bumped into the lamp) or outcome (I broke the lamp) of an action (cf. Talmy, 1985). Do young children expect language to encode this distinction?

Children's imitation patterns suggest that they analyze nonlinguistic events in these terms. When a head-touch is the simplest action available to a person making an effect happen, toddlers include just the outcome, not the means, in their own imitation (Gergely et al. 2002).

We ask whether syntax influences this inference. An experimenter with her hands occupied made a toy activate with a head-touch, using either Means-focused (I'm daxing to my toy) or Outcome-focused language (I'm daxing my toy). Toddlers then imitated the action. Means- but not Outcome-focus language encouraged children to include the distinctive head-touch, overriding the 'rational imitation' effect. This suggests that toddlers' knowledge of argument structure includes an understanding of a means/outcome divide in verb meaning.

Notes

POSTER SESSION I

Interactive participation facilitates children's processing of direct speech reports

Franziska Köder, University of Groningen

In two experiments, we investigated 5- and 9-year-old children's interpretation of the pronouns *I*, *you* and *he/she* in direct speech (Elephant said, "I get the car") and indirect speech (Elephant said that I get the car). The main difference between the two experiments is whether or not the child is involved in the interaction. In experiment 1, children assume the role of an eavesdropper; in experiment 2, they are directly addressed with a direct or indirect speech report. We found that in both experiments children make more mistakes when interpreting pronouns in direct as compared to indirect speech. We suggest that this is due to the perspective shift in direct speech from the actual to the original speaker's perspective. Children who are involved in the interaction make significantly less mistakes in direct speech than children who are external observers, indicating that interactive participation facilitates the perspective shift in direct speech.

POSTER SESSION I

Semantic reorganization: Does language influence the perception of event components?

Haruka Konishi, University of Delaware
Roberta Golinkoff, University of Delaware
Kathy Hirsh-Pasek, Temple University

Semantic reorganization is the process whereby infants show sensitivity to a seemingly universal set of event components, only later privileging those components that are expressed in their native language. While language is hypothesized to guide infants' progression from language-general to language-specific event perception, no prior studies have examined this hypothesis. To pursue this question, this study examined whether 23-month-old English-reared children's sensitivity to Japanese ground-path distinctions reappears when language heightens their attention to ground-path categories. Results suggest that when novel words are paired with two different ground-path categories, children succeed in revealing their sensitivity to these "non-native" event distinctions. Children who only heard neutral language did not show sensitivity to Japanese ground-path categories. Investigating the mechanism underlying semantic reorganization may further our understanding of how children learn to talk about events in their native language.

POSTER SESSION I

Hearing vs. CI: argument omission in ASL-English bilingualism and advantages of deafness

Helen Koulidobrova, Central Connecticut State University

We examine ~3000 English utterances from three English-ASL bilinguals with cochlear implants (bi-CIs, 3;07-5;02) for argument suppliance. We compare the data to that of English-ASL bilingual children of Deaf adults (bi-Kodas). Results show that like bi-Kodas, bi-CIs omit arguments at ages (>5;00) and in contexts (e.g. embedded subject and with modals) unattested in developing monolingual/unimodal bilingual English; however, bi-CIs' omission rates are significantly lower than bi-Kodas'. We attribute the difference to input: in our data, deaf parents of bi-CIs use English with their children significantly less than do parents of bi-Kodas, thus contributing to bi-CI's learning 'other language inhibition' sooner. Implication: while appearance of ASL in the English of ASL-English bilinguals is as natural a phenomenon as code-switching in unimodal bilingualism, deaf (but cochlear-implanted) children 'do better' in the spoken language precisely because their care-givers sign to them more. Implications for other 'code-mixing' phenomena, including sign-supported speech, are discussed.

POSTER SESSION I

What bilinguals can teach us about ambiguity resolution in online sentence comprehension.

Tatyana Levari, Harvard University
Jesse Snedeker, Harvard University

Children, through age 10, often fail to use top-down information to guide parsing during sentence comprehension, and subsequently fail to revise their interpretations when needed. One hypothesis is that improvement in this ability reflects improvement in domain-general executive functioning (EF). Alternatively, this ability may reflect cumulative language experience. In the current study, we compared monolingual and bilingual children (ages 5-7) on an EF battery, measures of language proficiency, and a test of syntactic-ambiguity resolution. Our results confirm that monolinguals show better vocabulary and grammar scores ($p < 0.05$), but we found no bilingual EF advantage in any task. Gaze data on the syntactic-ambiguity task demonstrates that bilinguals make better use of contextual information to identify an ambiguous referent. This advantage is unlikely to reflect differences in EF. We suggest that bilingual children may need to rely more on contextual information making them more aware of how language is influenced by context.

Notes

POSTER SESSION I

Acquiring the denotation of object-denoting nouns in a language without partitives

Suzi Lima, Federal University of Rio de Janeiro
Peggy Li, Harvard University
Jesse Snedeker, Harvard University

POSTER SESSION 1

Developmental Changes in Infants' Use of Communicative Gestures: Implications for Word Learning

Kelsey Lucca, Duke University
Makeba Wilbourn, Duke University

A strong relationship exists between infants' gesture use and vocabulary. However, it remains unclear whether the act of gesturing, in and of itself, facilitates word learning. Thus, this study set out to: 1) determine if infants are better able to learn a label for an object after they gesture towards it, as opposed to fixate their attention on it; 2) uncover which gesture types best facilitate word learning; 3) examine developmental changes in gesturing and word learning. Using a novel, interactive paradigm we elicited gestures from 12- and 18-month-old infants. If infants first pointed towards (compared to reached or looked at) an object, prior to hearing that object labeled, they were more likely to map a label onto that object. Results suggest that the act of pointing, in and of itself, facilitates word learning. Potential social and cognitive mechanisms driving the relationship between pointing and word learning will be discussed.

Notes

POSTER SESSION I

Are second language learners just as good at verb morphology as first language learners?

Alexandra Marquis, University of Montreal
Phaedra Royle, University of Montreal, The Centre for Research on Brain, Language and Music (CRBLM)

Four types of French verb participles (/e/, /i/, /y/ or idiosyncratic) were elicited in 169 first language (L1) or multilingual (MUL) learners of Québec French (aged 67-92 months) and attending preschool (n=105) or first grade (n=64). Verbs were presented in infinitival and present tense forms. Children produced the passé composé (perfect past) by answering the question 'What did he/she do yesterday?'

Preliminary analyses (n=94) reveal effects for verb group, and interactions for verb group*age group, and verb group*language group. Trends for language group effects, and the interaction of verb group*age group were found. Together, these indicate that responses differ according to verb type, age and language group (/e/ > /i/ > /y/ > idiosyncratic; preschool < first grade; L1 ≠ MUL).

Our analyses show that multiple factors affect children's mastery of passé composé, and that MUL children are sensitive to French inflection patterns. Non-parametric analyses highlight children's differing response strategies by verb and language groups.

POSTER SESSION I

When to hold and when to fold: Detecting structural changes in statistical learning

Benjamin Zinszer, Pennsylvania State University
Timothy Poepsel, Pennsylvania State University
Richard Aslin, University of Rochester
Daniel Weiss, Pennsylvania State University

Natural language contains temporal variation in underlying structures (e.g., changes in topic or speaker). In this statistical learning study, we ask whether learners can infer how many structures best describe the transitional statistics of a speech stream without explicit cues signaling changes in structure. English-speaking undergraduates were familiarized to two successive structures across five conditions. Condition 1 replicated the primacy effect of Gebhart et al. (2009) in which only S1 is learned. In Conditions 2, 3, and 4, we increased the number of switches between S1 and S2, varying durations and exposures to each structure. In these conditions, the primacy effect abated, suggesting that learners were cued to S2 by switching between structures. Condition 5 substituted a third, unlearnable structure for one of the S2 exposures, and S1 and S2 were both learned. These results demonstrate that learners can infer the number of underlying structures if switching is a cue.

POSTER SESSION I

2-year-olds' comprehension of personal pronouns

Morgan Moyer, University of Maryland - College Park
Kaitlyn Harrigan, University of Maryland - College Park
Valentine Hacquard, University of Maryland - College Park
Jeffrey Lidz, University of Maryland - College Park

The reference of pronouns, unlike proper names, shifts in different contexts based on who the discourse participants are. Because of this, learning pronouns requires awareness of and attention to speakers and their intentions. Previous studies report that children first acquire pronouns when they are the referents [7], suggesting they have difficulty understanding these discourse features. However, previous designs [7-9] may have obscured 2-year-olds' pronoun knowledge, due to the infelicitous and unnatural experimental situations used to probe shifting reference. In the current study, we introduce a cooperative social context to simulate real-world use of pronouns in directed and non-directed speech. We demonstrate that 2-year-olds have adult-like interpretation of 1st, 2nd, and even 3rd person, though they have some difficulty when the pronoun is underspecified for participant-hood.

POSTER SESSION I

Infants use phonologically strong function words in word segmentation and categorization

Cristina Name, Federal University of Juiz de Fora
Danielle Novais Uchôa, Catholic Pontifical University of Rio de Janeiro
Sabrina Teixeira, Catholic Pontifical University of Rio de Janeiro

We investigate 13-month-old Brazilian Portuguese infants' ability to segment phrases and categorize words using phonologically strong functors. Using a preferential looking procedure, we conducted two experiments. In Experiment 1, infants were familiarized with two nonsense nouns (tofe, bape). In the test, one group heard bape + real determiners and tofe + pseudo-determiners and the other group heard the reverse condition. Infants segmented the DPs, preferring the ones containing real determiners. In the second experiment, infants heard subject pronouns (Group 1) or determiners (Group 2) + nonsense words. In the test, all infants heard non-familiarized determiner or pronoun + nonsense words. Infants identified different functors as being determiner or pronoun classes and used this information to categorize novel words into noun or verb categories. The results suggest that, despite of its acoustical and phonological properties, BP functors are perceived early by infants and used in DP segmentation and word categorization.

Notes

POSTER SESSION I

Learning phonetic categories with phonotactics: the influence of predictability and phonetic naturalness.

Masaki Noguchi, University of British Columbia
Carla Hudson Kam, University of British Columbia

This study investigated the impact of contextual predictability (i.e. phonotactics) and phonetic naturalness on the distributional learning of novel phonetic categories. We found that when participants were exposed to input in which novel sounds were predictable based on phonological context they judged the sounds to be less perceptually distinct, as compared to when the sounds were not contextually predictable. Thus, contextual predictability led participants to form categories more like allophones than phonemes. However, this only occurred when the links between the targets and the contexts were phonetically natural (i.e., articulatorily similar to each other). This study sheds light on how different kinds of information in language input, both statistical and phonetic, are integrated into a system of knowledge during the acquisition of phonology

POSTER SESSION I

A conservative interpretation of the reflexive zibun by Japanese children

Naho Orita, University of Maryland - College Park
Hajime Ono, Tsuda College
Naomi Feldman, University of Maryland - College Park
Jeffrey Lidz, University of Maryland - College Park

The Japanese reflexive zibun can be bound across clause boundaries. However, we show that in speech to children long-distance reflexive zibun does not occur, leading us to ask about children's knowledge. We experimentally show that both children and adults accept local reflexive zibun. However, unlike adults, children incorrectly reject the long-distance antecedent for zibun, despite being able to access this antecedent for a pronoun, kare. This suggests that the differences they show for the long-distance zibun cannot be attributed to children's inability to access the matrix subject. Together, the corpus study and experiments are consistent with two explanations. First, children might have wrongly learned that zibun only allows local antecedents. Alternatively their grammars might be adult-like, but the availability of the local antecedent for zibun inhibits access to the long-distance antecedent, due to features of on-line antecedent retrieval.

Notes

POSTER SESSION I

L2 acquisition of Turkish vowel harmony and knowledge of the universal 'No Crossing Constraint'

Oner Ozcelik, Indiana University
Rex Sprouse, Indiana University

This paper proposes that universal phonological principles are at work in Interlanguage grammars. We focus on the so-called exceptional/noncanonical cases of Turkish vowel harmony (VH). In cases of canonical VH, specifications for [±back] (and [±round]) in suffix vowels spread from the immediately preceding vowel. However, in some cases, an intervening /l/ is pre-specified as [Coronal] (despite a preceding [+back] vowel), with the consequence that a following underspecified vowel surfaces as [-back], resulting in noncanonical VH. These "exceptional" cases of VH illustrate the 'No Crossing Constraint' of Universal Grammar (UG) (Hammond 1988). If UG constrains Interlanguage phonology, we expect English-Turkish L2ers to acquire noncanonical VH, despite receiving no systematic instruction and very limited input for this construction. Our findings with learners at three different proficiency levels confirm this hypothesis, demonstrating that the 'No Crossing Constraint' is active in the grammars of Turkish L2ers, suggesting that interlanguage phonology is constrained by principles of UG.

POSTER SESSION I

Examining the Validity of a Computer-Based Language Assessment for Preschool Children

Amy Pace, Temple University
Paula Yust, Temple University
Jill de Villiers, Smith College
Aquiles Iglesias, University of Delaware
Mary Wilson, Laureate Learning Systems
Kathy Hirsh-Pasek, Temple University
Roberta Golinkoff, University of Delaware
Andrea Takahesu Tabori, Smith College, Wellesley College
Kristina Strother-Garcia, University of Delaware
Katherine Ridge, University of Delaware

Researchers studying language acquisition in individuals or groups often need a brief assessment that is a valid index of language development, ideally one that is culturally and dialect neutral. Additionally, an index of what the child can learn rather than just what they have learned would be particularly useful. We evaluated the reliability and validity of a computer-administered assessment that provides a short, interactive, and culturally neutral measure of 3- through 5-year-old children's comprehension of vocabulary and grammar. The assessment measures both product (what children know) and process (how children learn to map novel words). Data were collected from a socioeconomically and geographically diverse sample (N = 285). Scores on the computerized assessment were compared to scores on the PPVT-4, PLS-5, and KABC-II Triangles subtest. The project provides researchers and educators with a reliable and valid instrument that assesses typical language development in diverse preschool children.

POSTER SESSION I

Developmental Continuity in Lexical Representations

Jie Ren, Brown University
James L. Morgan, Brown University

POSTER SESSION I

The acquisition of nominal and verbal inflectional morphology: Evidence from Basque ergativity in adult L2 speakers

Itxaso Rodriguez-Ordoñez, University of Illinois - Urbana-Champaign

This study contributes to ongoing debates concerning variable use of morphology in L2 grammars, i.e. whether variation arises from impairment in the functional domain (Impairment Representation Hypothesis; Meisel, 1997) or from problems in surface morphology (Missing Surface Inflection Hypothesis, MSIH; Haznedar, 2006). This paper analyzes variability in suppliance or omission of ergativity in nominal inflection among 48 L2-Basque L1-Spanish bilinguals, considering use of the auxiliaries izan (BE) and *edun (HAVE) according to verbal agreement. Results from oral interviews, an elicited production task and an acceptability judgment task reveal L2 speakers accurately identify ungrammatical sentences and provide the correct auxiliary verb, suggesting syntactic knowledge of ergativity. However, high rates of omission are found at the morphological level (nominal inflection) and at the phonological level, thus supporting the MSIH. Presenting the first empirical study of adult L2 Basque ergativity, this paper further discusses adults' ergative use in relation to child bilingual acquisition.

Notes

POSTER SESSION I

Allow me to repeat myself: Repeating words in adjacent utterances facilitates young children's word learning

Jessica Schwab, Princeton University
Casey Lew-Williams, Princeton University

Toddlers who hear more child-directed speech (CDS) tend to develop larger vocabularies (Weisleder & Fernald, 2013). But what specific structural features of CDS enable vocabulary growth? One potentially beneficial component of CDS is parents' repetition of words across neighboring utterances (Newport et al., 1977; Onnis et al., 2008). In a looking-while-listening procedure, 2-year-olds were taught three words for novel objects, with labels either repeated across neighboring utterances or distributed throughout the learning phase. Results showed that children identified target objects more accurately at test when labels had been repeated in adjacent utterances. Discussion will incorporate these findings with research on massed versus distributed learning, offering a new perspective on the time-scale of optimal information flow. While previous research indicates that word learning improves when information is distributed over multiple weeks (Childers & Tomasello, 2002), we conclude that immediate opportunities to detect recurring structure also facilitate learning of label/object pairs.

POSTER SESSION I

Beyond a Word: Language (Non)Selectivity in Bilingual Processing of Multiword Sequences

Elena Shimanskaya, University of Iowa

Notes

POSTER SESSION I

Perceptual attrition of lexical tone among L1 Yoruba-speaking children in Canada

Saliu Shittu, University of Alberta
Anne-Michelle Tessier, University of Alberta

Three perception experiments were conducted with L1 Yoruba-learning children (ages 8-15) and native Yoruba-speaking adults, all immigrants to English-speaking Canada, to investigate the attrition of lexical tone. Using Yoruba's High, Mid and Low tones, the study's identification, discrimination and lexical tasks investigated whether some tones undergo greater attrition than others, and which external factors encourage or resist attrition. The broadest result was that tonal perception was difficult even for adults, and that children's perception was frequently at chance. Nevertheless, some results correlated with adult studies of Yoruba perception: children were reliably better at identifying High tones than Mid or Low, and H vs. L tone sequences were crucial to most children's discrimination. The two important external factors that predicted children's successful perception were time in Canada and richness of their Yoruba language environment. This study provides initial data on rapid L1 tonal attrition in childhood, despite daily L1 exposure.

POSTER SESSION I

Japanese children accept inverse-scope readings induced by scrambling, but they do not accept unambiguous inverse-scope readings induced by prosody

Ayaka Sugawara, Massachusetts Institute of Technology
Ken Wexler, Massachusetts Institute of Technology

This study investigates whether Japanese-speaking children are sensitive to syntax and prosody in understanding relative scope of a universal quantified subject and negation. In Japanese, the canonical word order "SuniversalOV-NEG" only has the "all>not" reading, while the scrambled order "OSuniversalV-NEG" is ambiguous between "all>not" and "not>all," since there are two different LFs available to derive the scrambled word order. On the other hand, sentences with contrastive prosody with a topic marker, "[Suniversal] F-TOP OV-NEG", are unambiguously "not>all," since it requires implicature computation involving reconstruction of the universal subject under negation. Our experiments show that children can access the "not>all" reading when syntax supports it (scrambling), but have difficulty with LF computations induced by the contrastive prosody.

POSTER SESSION I

Young infants' discrimination of subtle phonetic contrasts

Megha Sundara, University of California - Los Angeles
Celine Ngon, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS)
Katrin Skoruppa, University of Essex
Naomi Feldman, University of Maryland - College Park
Glenda Onario, Brown University
James Morgan, Brown University
Sharon Peperkamp, Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique

A large body of research has documented the different trajectories that unfold during the functional reorganization of infants' phonetic perception. It is generally accepted that infants initially discriminate both native and non-native contrasts equally well and that perceptual reorganization within the first year of life results in decreased discrimination of non-native contrasts and improved discrimination of native contrasts. However, recent findings from Narayan and colleagues (2010) surprisingly show that some acoustically-subtle native contrasts might in fact not be discriminated until the end of the first year of life. The present study provides countervailing evidence that young infants can discriminate comparably subtle contrasts. Six-month-old English- and French-learning infants tested with a visual habituation paradigm were able to discriminate two phonetically-similar, non-native, dental-retroflex contrasts, a pair of laterals and a pair of nasals, from Tamil. We discuss the implications of our findings for current theories of the development of speech perception.

POSTER SESSION I

Preschoolers use lexical contrast to learn duration words

Katharine Tillman, University of California - San Diego
David Barner, University of California - San Diego

Children use time words like minute and hour early in development, but take years to acquire their precise meanings. Here we investigate how children initially learn to interpret seven time words: second, minute, hour, day, week, month, and year. Our findings indicate that children first learn that time words form a lexical class, then infer their relative orderings (e.g., hour > minute), but have little to no knowledge of their absolute durations. Knowledge of duration emerges much later in development – many years after children first start using time words in speech – and in many children does not emerge until they have acquired formal definitions for the words. We conclude that associating words with the perception of duration does not come naturally to children, and that early intuitive meanings of time words are instead rooted in relative orderings, which children may infer from their use in speech.

Notes

POSTER SESSION I

(Lack of) Frequency Effects in Children's Early Speech

Virginia Valian, City University of New York - Hunter College, City University of New York - Graduate Center
Erin Qurk, City University of New York - Graduate Center

From frequent sequences in the input, young children could build a repertoire of initially unanalyzed or partially analyzed strings, later followed by parsing and classifying into syntactic categories. We analyze 21 children observed cross-sectionally to determine how often children's most frequent strings occur in the parent's input and how often parents' most frequent strings occur in the children's productions. Children were maximally different from their parents at the lowest MLUs: they made little use of frequent bigrams and trigrams at lower MLUs. Further, only a small percentage of parents' speech consists of highly frequent combinations: 2.5% of bigrams and 8.6% of trigrams are among parents' top 10 ngrams. In contrast, children's top 10 ngrams were a large percentage of their overall tokens: 16% of bigrams and 13% of trigrams were in their top 10. Children's speech is repetitive, but their frequent sequences are their own creation, not their parents'.

POSTER SESSION I

Infants use talker-specific phonetic detail during word learning

Drew Weatherhead, University of Waterloo
Katherine White, University of Waterloo

We explored whether 10-12-month-olds can track talker-specific detail and use it during word learning. During exposure, infants heard two talkers whose word pronunciations differed in the height of their front vowels; one speaker trained them on a word-referent mapping. At test, infants saw the trained object and a novel object and heard each speaker use the same novel label. When the label had a front vowel, infants responded differently as a function of talker - mapping it to the novel object for the training speaker and to the trained object for the other speaker - but when it had a back vowel, they mapped it to the novel object for both talkers. These results suggest that a) infants expect one-to-one mappings between objects and labels for a single talker, but not across differently accented talkers and b) infants use talker-specific phonetic detail to constrain referential interpretations.

Notes

POSTER SESSION I

Phoneme age-of-acquisition effects on phonological priming

Tania Zamuner, University of Ottawa
Meredith Weinhold, University of Ottawa
Stephanie Strahm, University of Ottawa

To produce a word, a speaker must retrieve stored representations from memory. This differs for adults and children, in part because children are learning language and building representations. With adults, sound priming has been shown to facilitate spoken word production (Morsella & Miozzo, 2002). While sound priming has been found in comprehension with infants (Mani & Plunkett, 2011), onset-related priming effects have not been found in production studies with young children (Brooks & MacWhinney, 2000). This research uses a phonological priming task to assess spoken word production. Children heard auditory primes that varied in their sound similarity to the target: phonological related or unrelated, and beginning with early- or late- acquired sounds. Words with early-acquired sounds had a stronger priming effect. However, an inhibitory priming effect was found, opposite to the facilitatory priming effect reported with adults. This suggests that the relationship between phonological, lexical and output changes across development.

POSTER SYMPOSIUM

Linguistics for Everyone: Engaging a broader public for the scientific study of language acquisition

Joan Maling, Brandeis University, NSF (co-organizer)
Barbara Pearson, University of Massachusetts Amherst (co-organizer)
Elly Zimmer, University of Arizona
Hui-Yu Huang, University of Arizona
Cecile McKee, University of Arizona
Kathryn Campbell-Kibler, The Ohio State University
Cynthia G. Clopper, The Ohio State University
Kiwako Ito, The Ohio State University
Leslie Moore, The Ohio State University
Shari R. Speer, The Ohio State University
Laura Wagner, The Ohio State University
Jeff Lidz, University of Maryland
Rachel Dudley, University of Maryland
Katie Leech, University of Maryland, Harvard University
Meredith Rowe, Harvard University
Colin Phillips, University of Maryland

This poster symposium presents ideas for ways linguists and psychologists working in language acquisition can educate the public about the kinds of things we study and why they matter in the big picture. The posters provide examples of interactive activities students and faculty have developed to engage the public and teach them about different aspects of language, such as how the vocal tract works, the automaticity of reading, and children's word learning strategies. One of the posters presents an overview of the rationale, a short chronology, and a list of resources for such activities. The presenters have used these activities at science festivals, in museum exhibits, museum research installations, science cafe programs, and K-12 classroom demonstrations and workshops. The projects achieve a secondary aim of improving the presenters' skills as communicators, strengthening cross-department community, and promoting a broad sense of civic engagement.

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Session A--Metcalf Small

Homologies Between Language and Event Cognition

Frances Wilson, Cambridge University
Ercenur Unal, University of Delaware
John Trueswell, University of Pennsylvania
Anna Papafragou, University of Delaware

Thematic roles in language (e.g., Agents, Patients) describe the relationship that constituents (NPs/PPs) have with a verb. In linguistic theory, there is an asymmetry in the prominence of thematic roles. In two experiments, we used caused-motion events to assess whether (a) the relative prominence of Patients, Goals and Instruments in linguistic representation is subject to this asymmetry, and (b) the prominence asymmetry extends to event cognition. In Experiment 1, the relative proportion of mention of each component was Patients>Goals>Instruments. In Experiment 2, the relative speed at which adults detected the changes to each component was Patients>Goals>Instruments; and children's relative accuracy in detecting changes in each component was Patients=Goals>Instruments. Our results demonstrate a homology between linguistic and conceptual representations of event components in both children and adults, supporting the position that thematic roles in language are relational notions at the interface with conceptual structure.

Session B--Terrace Lounge

Revisiting the Epistemic Gap: evidence for a grammatical source

Ailis Cournane, University of Toronto

The epistemic gap (EG) refers to a period during which children use modal verbs (e.g., have to, must) with exclusively non-epistemic meanings (e.g., deontic: "You must leave," vs. epistemic, "He must be hungry") (Stephany 1977; Wells 1985). Previous work has explained the EG (until ≥3;0) by appealing to the idea that young children lack requisite conceptual development (Moore and Furrow 1991; Papafragou 1998), but has not addressed the possibility that young children may lack components of the grammatical representation for the target constructions (de Villiers 2007). Furthermore, previous naturalistic studies investigated only certain types of modals, and did not examine frequency effects. The current study explores the frequency hypothesis and the grammatical one and finds evidence in favor of the grammatical hypothesis, over both competitors.

Session C--Conference Auditorium

Evidence for a substantive bias in synchronic grammar

Dinah Baer-Henney, University of Potsdam
Frank Kügler, University of Potsdam
Ruben van de Vijver, Heinrich-Heine University

We investigate the nature of a substantive bias in learning presenting data of an artificial learning experiment about intervocalic stop voicing; whether generalization of this pattern is driven by frequency or substance.

Based on a corpus study we predict that a frequency driven learner would prefer dorsals over coronals. A substance driven learner would prefer labials over coronals over dorsals based on articulatory constraints.

We trained German adults intervocalic stop voicing of either labial, coronal or dorsal stops, respectively. We tested participants with either place. Dorsal learners had more difficulties than labial and coronal learners in trained contexts. Learners extended voicing more to the articulatory more front condition in untrained contexts: Labial learners generalized more to coronals than to dorsals, coronal learners generalized more to labials than to dorsals.

Learners rely on a substantive bias. Substance can be interpreted as phonetical in nature and the factor is gradient, not categorical.

Notes

Session A--Metcalf Small

Left-Right Language and Perspective Taking in Tseltal Mayan Children

Linda Abarbanell, Harvard University, Centro de Investigaciones y Estudios Superiores en Antropología Social
Peggy Li, Harvard University

Prolonged acquisition of "left" and "right" has been taken as evidence that left-right concepts not available prior to language learning. Recently, however, Tseltal Mayan speakers who do not use left-right terms projectively were shown to easily reason about spatial relationships using their own (egocentric) left-right perspective. Many Tseltal-speaking adults, however, have difficulty taking the left-right perspective of another entity. Such tasks are not solved by English-speaking children until they are approximately 10 years old, about when they acquire non-egocentric left-right language. The adults tested, however, had little schooling, which was positively correlated with performance. Presently, we therefore tested 10-13 year old Tseltal-speaking school children to determine if language was driving these results. Experiment 1 confirmed the children had difficulty with the task. The use of "left"/"right" terms to label the sides of the other entity improved their performance when prompted by the experimenter; however, the children did not maintain these gains when tested on their own. The children in Experiment 2, however, did maintain such gains when using gestures rather than lexical labels. These results suggest that left-right language is not needed to represent such relationships. Further, gestures may be better suited for teaching non-egocentric left-right perspective-taking skills.

Session B--Terrace Lounge

Differences between Dutch and English children's interpretation preferences of quantifiers: input or acquisition stage?

Margreet van Koert, University of Amsterdam
Olaf Koeneman, Radboud University Nijmegen
Fred Weerman, University of Amsterdam
Aafke Hulk, University of Amsterdam

Employing a picture selection task (PST) we found that English children's interpretation preferences of quantifiers diverge from adults'. On the contrary, Dutch children's interpretation preferences of quantifiers follow the adults' preferences more closely.

This study compared the comprehension of Dutch quantifiers – ieder(e) 'each/every' and elk(e) 'each/every'– by Dutch children (n=77) and adults (n=19) to the comprehension of English quantifiers – each and every – by English children (n=75) and adults (n=25). The PST consisted of two pictures: three protagonists each paired with one experiencer (distributive); three protagonists together paired with one experiencer (collective). Participants had to pick one of the pictures for the sentence they heard.

Both quantifiers receive significantly more distributive readings in Dutch than in English. Dutch participants and English adults choose the distributive picture significantly more often than chance; yet, English children show chance behaviour. We argue that input alone cannot account for these results; instead, acquisition stages interfere.

Notes

Session C--Conference Auditorium

A child-specific compensatory mechanism in the acquisition of English /s/

Hye-young Bang, McGill University
Meghan Clayards, McGill University
Heather Goad, McGill University

English /s/ is noteworthy because its developmental outputs are not likely attributable to misperception considering its acoustic saliency and high typological frequency. We suggest that children's outputs that are phonetically different from the target are due to limitations of their articulatory system. We further hypothesize that children use the adult target grammar as their phonological goal and therefore, children may use compensatory mechanisms to approximate the target phonetic output in articulatorily challenging contexts. The current study examined corpus data involving word-initial [sV] productions from 79 children aged 2-5 in comparison with a corpus of word-initial [sV] syllables produced by 13 adults. We found that children produced more target-like /s/ in low vowel contexts, in contrast to what was observed in previous studies. We conclude that children may adopt a more accessible mechanism to compensate for their immature lingual gestures possibly as an attempt to maximize phonological contrasts in word-initial position.

Session A--Metcalf Small

Mechanisms for Linguistic Relativity in Child Memory

Marc Ettlinger, Department of Veterans Affairs
Jennifer Lanter, University of Wisconsin - Green Bay

Previous research has shown that language ability can affect performance on a wide range of cognitive tasks. Absent from most of this research, however, is an investigation of the mechanism involved. In the present study, we explore the role of sub-vocalization as a possible mechanism accounting the role of language development on memory ability in children.

Children have long been known to produce correct plurals more often for consonant-final words (e.g., socks) than sibilant-final (e.g., dresses). We have previously shown that this influences visual object recall as memory for object plurality depends on the phonology of the word pluralized. In two experiments, we investigated a potential mechanism for this effect by inhibiting and facilitating children's ability to sub-vocalize. When inhibited from sub-vocalizing, the phonological effect on memory disappears; when required to vocalize, the effect persists. This suggests that sub-vocalization is indeed a mechanism supporting this instance of language influencing memory.

Session B--Terrace Lounge

Mapping properties to individuals in language acquisition

Kristen Syrett, Rutgers University

Children learning a new adjective must determine not only what kind of property it denotes, but also additional aspects of its semantic representation, which have consequences for the nouns it modifies and the truth conditions of sentences in which it appears. For example, Distributive Predicates (e.g., tall, round) indicate that the individuals in the group denoted by the NP have the property in question, and not the group itself. This applies to count nouns with plural marking, and object mass nouns alike. I demonstrate experimentally that by age three, children are attuned to the semantic restrictions of Distributive Predicates, and know that they depend on the decomposable structure of groups and predicate of the atomic parts, regardless of whether it is referred to with plural or mass morphosyntax. Children's knowledge of the count/mass distinction and group representation is therefore recruited not only for noun learning, but for adjective learning, too.

Session C--Conference Auditorium

In constrained contexts, preschoolers' recognition of accented words is excellent

Sarah Creel, University of California - San Diego
Dolly Rojo, University of Texas - Austin, University of California - San Diego
Nicolle Paullada, University of California - San Diego

Do unfamiliar accents impair young children's language comprehension? Infants detect familiarized word-forms heard in accented speech by 13 months, yet 4-year-olds have difficulty repeating isolated words in unfamiliar accents. The current work attempts to integrate these disparate findings by testing accented word recognition with or without semantic constraint, visual-contextual constraint, and rapid perceptual accent adaptation. Monolingual English-learning preschoolers (n=32) completed an eye-tracked word recognition test. On each trial, four pictures appeared; 500 milliseconds later, a sentence— sensical or nonsensical, American-accented or Spanish-accented— was spoken. Children attempted to select mentioned pictures as eye movements were tracked. Word-recognition accuracy and visual fixations were higher for sensical than nonsensical sentences. However, accuracy did not differ between accents, and fixations differed only marginally. Thus, preschool-aged children adeptly recognized accented words with semantic and visual-contextual constraint. Ongoing work tests recognition of words excised from sentences (no semantic contraints), and repetition of words (no visual-contextual constraints).

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Session A--Metcalf Small

Determining the abstractness of Determiners

Charles Yang, University of Pennsylvania
Edward Wadsworth, University of Pennsylvania
Virginia Valian, City University of New York - Hunter College, City University of New York - Graduate Center

The metric of determiner-noun overlap has been used to quantify the degree of productivity in child language (Pine & Martindale 1996 JCL, Tomasello 2000 Cognition, Valian et al. 2009 JCL). Using the Manchester corpus, we show that the variation in the determiner overlaps across subjects is well accounted for by the size and the number of distinct nouns contained in the sample (Valian et al. ibid, Yang 2013 PNAS). In addition, we evaluate a recent sampling based approach to overlaps that controls for the identity and frequency of nouns between child and adult usage (Pine et al. 2013 Cognition). A mathematical analysis shows the proposed method to be biased.

Session B--Terrace Lounge

How early do children understand different types of iconicity in gesture?

Leslie Hodges, Georgia State University
Seyda Ozcaliskan, Georgia State University
Rebecca Williamson, Georgia State University

Children produce iconic gestures conveying action earlier than iconic gestures conveying attribute information. In this study, we ask whether children's comprehension of iconic gestures follows the same path, with earlier comprehension of iconic gestures conveying action. To test this question, we presented 2-, 3- and 4-year-old children and adults (18/group) with 12 minimally-informative speech+iconic gesture combinations, conveying either an action ('I have this one'+flapping arms as if BIRD FLYING) or an attribute associated with a referent (fingers spread as if BIRD'S WINGS); we then asked them to chose between two pictures--either a correct (e.g., bird) or an incorrect (e.g., basketball) match to the gesture. Children could identify the referent of an iconic gesture conveying action by age 2 ($t(17)=3.70$, $p<.01$) and attribute by age 3 ($t(17)=4.61$, $p<.01$), reliably above chance. Our results show relatively early comprehension of iconic gestures, with the developmental trajectory of comprehension mirroring production.

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Session C--Conference Auditorium

Acquiring Murrinhpatha: an endangered polysynthetic Indigenous language of Northern Australia

William Forshaw, The University of Melbourne
Barbara Kelly, The University of Melbourne
Gillian Wigglesworth, The University of Melbourne
Rachel Nordlinger, The University of Melbourne

Murrinhpatha is one of a small number of Australian indigenous languages still being acquired by children. It is a polysynthetic language, with complex verbal predicates which are formed with discontinuous elements in the verbal word, many of which are non-compositional semantically. In languages like English, these words would require entire phrases to express. For example, the Murrinhpatha word WURDAMninthaDHAWIWEPERLwardagathu means "then the two male non-siblings spoke out in unison", with the two bolded elements jointly providing the predicate 'speak out in unison'.

Longitudinal language sampling of six children (four girls; two boys) over two years, starting between age 1;9-4;3 forms the basis of our study. We present findings analyzing the structures of adult speech and child production focusing on Murrinhpatha's discontinuous verb stem structures. We show that children initially use a small section of the verb paradigm and omit verb elements based on stress and word place prominence.

Session A--Metcalf Small

What can children learn from 6 million words?

Jon Willits, Indiana University
Michael Jones, Indiana University

What can children learn about word's meanings from their distributional statistics? We investigated this question using a semantic model constructed from the statistics of 6,000,000 words of child-directed speech, assessing what the model learned about the words' categories and hierarchical structure. Similarity statistics from the model could be used to infer whether two words belonged to the same category. Further, the words' similarity space appeared to be quite hierarchical. In addition, the model's difficulty learning words was correlated with children's MCDI ratings. These analyses demonstrate that words' distributional statistics are incredibly useful for inferring words' categorical relations. Further, the statistics suggest that taxonomic and hierarchically structured representations would be a natural consequence, given the structure of the input. Finally, the correspondence between words the model learned easily, and the words children acquire earlier, suggests that children's learning mechanisms and representations may bear some relationship to those in the model.

Session B--East Balcony

Signatures of Domain-General Categorization Mechanisms in Color Word Learning

Daniel Yurovsky, Stanford University
Katie Wagner, University of California - San Diego
David Barner, University of California - San Diego
Michael C. Frank, Stanford University

Learning color words is a difficult problem for young children. Because color is abstract, this has been attributed to difficulty integrating over heterogeneous objects to discover color as a domain of reference. On this account, discovering the color domain is slow, but subsequently mapping words to hues is fast. Recent work suggests an alternative: children may rapidly identify the color domain, but slowly discover the individual color category boundaries. If so, the learning mechanisms underlying the acquisition of color words parallel those underlying the acquisition of concrete object categories. We test this proposal by predicting children's performance in a color naming task using three factors studied in category learning: input frequency, category size, and perceptual salience. We show that, for the 11 English basic color terms, a color's frequency in CHILDES, category size, and perceptual salience each predict significant variance in it's ease of acquisition for 2-4 year olds.

Session C--Conference Auditorium

Production-Comprehension Asymmetries in Language Acquisition: The Case of Evidential Morphology

Ercenur Unal, University of Delaware
Anna Papafragou, University of Delaware

Although children typically comprehend the links between specific forms and their meanings before they produce them, the opposite pattern also occurs. Here we focus on the evidential system in Turkish as an example of this asymmetry. In three experiments, we compare evidential production and comprehension directly using matched stimuli and multiple comprehension measures to explore theoretical explanations of this asymmetry. In Experiment 1, children began producing the appropriate evidential based on the evidence they were presented with at age 3. However, in Experiment 2 comprehension was not adult-like even at age 5 and lagged behind production for the same events. The asymmetry persisted in Experiment 3 when processing and metalinguistic demands of the comprehension task were lowered. This asymmetry does not seem linked to metalinguistic/processing demands of comprehension tasks. We suggest that evidential comprehension is delayed by the development of theory of mind abilities needed to compute others' knowledge sources.

Notes

LUNCH SYMPOSIUM

Perception and social interpretation of linguistic variation in infants and children

Amanda Seidl, Purdue University (organizer)
Laura Wagner, Ohio State University
Katherine Kinzler, University of Chicago
Rachel Schmale, Northpark University
Alejandrina Cristia, CNRS
Cynthia G. Clopper, Ohio State University
Elizabeth A. McCullough, Ohio State University
Jocelyn Dautel, University of Chicago
Zoe Liberman, University of Chicago
Amanda Woodward, University of Chicago

The three talks in this symposium will focus on results from the emerging field of developmental sociolinguistics. The field of language acquisition is typically concerned with how children draw generalizations over varied input, but just as important is how children are able to account for linguistic variation itself. Some variation across individual speakers is socially meaningful, as is the case with regional dialects or accents. These talks explore how infants and children are able to perceive accent-based variation in language, how they accommodate their understanding of individual speakers as a function of accent, how they categorize speakers into groups using accent as a cue, and how they use accent-based variation as a source of social judgment and inference.

Accent Accommodation: Emerging Strategies in Development
Amanda Seidl, Rachel Schmale, & Alejandrina Cristia

We discuss recent literature from our and other research groups documenting both positive and negative effects of accent exposure for infants and young children. Additionally, we explore two specific mechanisms subtending accommodation to novel accents, both of which are uniquely supported by current findings in toddlers. One of them builds on lexical knowledge: the listener may deduce that if a speaker pronounces *sock* as *sack*, therefore by *black* she probably meant *block*. A second strategy does not rely on lexical knowledge alone, and through it listeners come to accept non-standard pronunciations when variability is expected due to the nature of the interaction or interlocutors. We discuss the benefits and weaknesses of both of these strategies and how these strategies might emerge for the developing child.

Tracing Dialect Perception Through the Lifespan
Laura Wagner, Cynthia G. Clopper, & Elizabeth A. McCullough

The ability of adults to distinguish, identify, and classify a range of regional dialects has been well established and recent work has documented that infants, too, can perceive at least some distinctions among dialects. Paradoxically, pre-school aged children apparently have difficulty categorizing talkers into dialect-based groups. We discuss recent results from an ongoing, large-scale project tracing the development of dialect production, perception, and the ability to attach social meaning to dialect from pre-school aged children through adulthood. For instance, results from two studies (N = 560) using a free-classification paradigm in which participants grouped American talkers based on their perceived regional dialects, found qualitative changes in performance between 5 and 9-year-olds, and more minor quantitative improvements in ability between 9 and 12 yeas of age. Additional results concerning perception and social judgments will be discussed, as will some possible developmental paths that could account for dialect abilities across the lifespan.

The Origins of Language as a Social Category
Katherine Kinzler, Jocelyn Dautel, Zoe Liberman, & Amanda Woodward

Do children use language and accent to guide their inferences about others' social relationships? In a first study, 5- to 6-year-old monolingual English-speaking children predicted that friendship would occur between individuals who spoke with a common accent, even if those people could not communicate effectively (e.g., if one speaker produced nonsense language or unconventional grammar). A second study tested whether the tendency to view language as indicating social relationships begins in infancy. Nine-month-olds from monolingual English-speaking environments viewed videos of two individuals who spoke the same or different languages. Infants then viewed videos depicting the actors affiliating or disengaging. Infants' patterns of looking indicated that they inferred that people who spoke the same language were more likely to affiliate than people who spoke different languages. Together, these studies provide evidence that language serves as a marker of social categorization, which guides infants' and children's expectations about third-party social structure.

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Session A--Metcalf Small

Infants are sensitive to coarticulatory cues during word recognition

Tristan Mahr, University of Wisconsin - Madison
Brianna McMillan, University of Wisconsin - Madison
Jenny Saffran, University of Wisconsin - Madison
Jan Edwards, University of Wisconsin - Madison

During fluent speech, coarticulation occurs when articulatory gestures in nearby sounds overlap and influence each other, and adults can exploit coarticulatory cues during word recognition. Toddlers recognize words incrementally and show sensitivity to sub-phonemic details of speech sounds, but it is not known whether they are sensitive to anticipatory coarticulation. The purpose of this research was to determine whether 18-24 month-olds used coarticulatory cues on the word "the" to anticipate the following noun. We performed a looking-while-listening eye-tracking experiment to examine the time course of word recognition under neutral versus facilitating coarticulatory conditions. Participants looked to the target image significantly sooner (100 ms) when the word "the" contained coarticulatory cues. These results provide the first evidence that novice word-learners can take advantage of sub-phonemic cues during word recognition. (Supported by NIH.)

Session B--Terrace Lounge

Executive Functions Predictors of Learners' Language Processing Abilities: A Training Study

Lucia Pozzan, University of Pennsylvania, University of New South Wales
Kristina Woodard, University of Pennsylvania
John Trueswell, University of Pennsylvania

Real time language comprehension and production require focusing on and rapidly integrating multiple sources of information. Growing evidence shows that this process is supported by domain-general executive function (EF) skills. Here, we explore whether the ability to process complex sentences in a second language (a) is supported by EF skills and (b) can benefit from EF training.

Over 2 months, 20 Chinese child learners of English played games (www.lumosity.com) aimed at training EF-skills. Pre and post-training sentence processing tasks were also administered. EF skills reliably predicted differences in sentence processing at pre-test; moreover, training-related EF improvements predicted sentence processing improvements.

These results indicate that (a) domain-general EF skills support language processing and (b) training-related gains can transfer to untrained domains. Such findings represent an important step in identifying the cognitive processes that underlie language processing and development and the circumstances under which language learners might benefit from domain-general cognitive gains.

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Session C--Conference Auditorium

Young children's comprehension of negation

Tracy Reuter, Harvard University
Roman Feiman, Harvard University
Jesse Snedeker, Harvard University

We used the visual world paradigm to investigate whether 2-year-olds can interpret negation. Children heard a story with visual referents as context for critical sentences ("DW broke/didn't break one of the plates"). We analyzed the proportion of fixations to the affirmative target (e.g. the broken plate), and picture selection responses. For both sentence types, 2-year-olds looked to correct targets, but this effect disappeared post-sentence, and responses were at chance. We then used a blocked design, and found a sentence-type-by-block interaction. When block 1 was affirmative, 2-year-olds interpreted both types correctly, but when block 1 was negative, 2-year-olds were at chance for both types. Taken together, results suggest 2-year-olds' comprehension difficulties may stem from the processing costs involved in constructing the negative. It is possible that when children first construct the affirmative form, this reduces difficulty of constructing the base proposition, and frees up resources to construct the negated interpretation.

Session A--Metcalf Small

Learning novel neighbors: syntactic category matters

Isabelle Dautriche, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS), Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique - CNRS
Daniel Swingley, University of Pennsylvania
Anne Christophe, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS), Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique - CNRS

Novel words (like tog) that sound like well-known words (dog) are hard for toddlers to learn, even though children can hear the difference (Swingley & Aslin, 2002, 2007). We tested whether phonological competition itself is the cause or whether a broader set of probabilistic considerations is responsible: toddlers may resist considering tog as a novel object label because its neighbor dog is also an object. In three experiments, French 18-month-olds were taught novel object-labels whose word forms were phonologically similar to familiar nouns (noun-neighbors), familiar verbs (verb-neighbors), or no words (no-neighbors). Toddlers took into account semantic or syntactic likelihoods when interpreting novel words: they successfully learnt the no-neighbors and verb-neighbors (taught as object labels) but failed to learn the noun-neighbors. We conclude that when creating a novel lexical entry, toddlers' evaluation of similarity in the lexicon is multidimensional, incorporating both phonological and semantic or syntactic features.

Session B--Terrace Lounge

Potential clinical markers for SLI in bilingual children

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Difficulties with consonantal assignment to syllabic structure have been reported for children with specific language impairment (SLI). In a bilingual context, however, problems with syllable structure could stem from these constructions not having being acquired yet in the second language (L2) or from language impairment. To address this problem, we designed a non-word repetition (NWR) task with language-independent and language-dependent items, thus limiting lexical weight and lowering the importance of amount of exposition to the L2.

The children with SLI (monolingual and bilingual) performed significantly lower than the typically-developing children on both parts of the task, which suggests that their phonological difficulties were not totally related to the acquisition of L2 properties. Moreover, low scores always involved syllable complexity, and liquids in coda position (e.g. /pil.fu/) led to particular difficulties in each group: the internal coda appears to be the best candidate for a clinical marker of a phonological deficit.

Session C--Conference Auditorium

The developing integration of discourse cues in children's sentence processing

Hugh Rabagliati, University of Edinburgh
Annie Heron, University of Edinburgh
Amy Young, University of Edinburgh

How does the cognitive architecture for sentence processing develop? Adults incrementally integrate multiple types of information, e.g. when resolving the ambiguous PP in tickle the frog with the feather, they attend to low-level cues like verb bias or prosody, and high-level cues like visual context or plausibility. By contrast, these information types dissociate in preschoolers. Visual world studies show that children are sensitive to low-level, but not higher-level, cues. We asked whether this insensitivity extends to discourse. Here, the instruction tickle the frog with the feather served as an answer to a biasing question (e.g., which frog should we play with now?). In both actions and eye-movements we found that 5-year-olds could integrate the discourse cue, but only when bottom-up cues (i.e., verb bias) were weak. Moreover, any integration of the discourse cue was delayed compared to (adult-like) 7-year-olds. These results confirm a surprising top-down insensitivity in parsing development.

Notes

Session A--Metcalf Small

Verb learning biases extend across semantic fields

Amy Geojo, Harvard University
Jesse Snedeker, Harvard University

Session B--Terrace Lounge

Linking conversational inferences to the speaker's knowledge state

Anna Papafragou, University of Delaware
Carlyn Friedberg, University of Delaware
Matthew Cohen, University of Delaware

Children, unlike adults, often accept logically true but underinformative statements ("Some Xs Y" when all Xs Y). Here we asked whether children, like adults, understand the link between the informational strength of an utterance and the speaker's knowledge state: a speaker uttering "Some bananas are yellow" may intend to implicate either that she does not know whether the stronger statement "All bananas are yellow" is true or that she knows that it is not. In two experiments we asked children to attribute strong (e.g., "All Xs Y") or weak (e.g., "Some Xs Y") utterances to fully or partly informed observers. Our studies show that 5-year-olds consult the speaker's epistemic status in calculating pragmatic inferences. Four-year-olds seem less capable of taking the epistemic step despite the fact that they can assess utterance informativeness. These findings point to both early successes and limitations in the development of pragmatic abilities.

Notes

Session C--Conference Auditorium

Pause Trumps All: A Corpus-Based Study on Prosodic Boundary Cues in Japanese Child-Directed Speech

Bogdan Ludusan, Ecole des Hautes Etudes en Sciences Sociales
Andrew Martin, RIKEN Brain Science Institute
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Emmanuel Dupoux, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS)

In this study we investigate the acoustic cues that may be used by infants to detect prosodic boundaries. Differently from previous studies on the topic, we use machine learning techniques to quantify the importance of these cues for the task of boundary detection. For this, we employ a large, naturalistic database, the RIKEN corpus, containing 11 hours of conversations between 22 Japanese mothers and their 18- to 24-month-olds. We focused on accentual and intonational phrase boundaries and used cues previously applied to automatic boundary detection, based on durational and pitch measurements. We found that pause duration alone yields a performance of around 79% (area under the ROC curve), and that adding other cues brings, at most, an improvement of 4% (using decision trees or neural networks). We propose that pauses may be used as the primary segmentation cue by infants, helping them to learn the other cues.

Session A--Metcalf Small

Development of the verb-event link between 14 and 18 months

Angela Xiaoxue He, University of Maryland - College Park
Jeffrey Lidz, University of Maryland - College Park

We investigate English-learning infants' early understanding of the link between the grammatical category verb and the conceptual category event, and their ability to recruit morphosyntactic information online to learn novel verb meanings. We report two experiments using Habituation-Switch Paradigm. In Exp.1, we habituated 14- and 18-month-olds with two scenes each paired with a sentence containing a novel verb; at test, we found dishabituation in both age groups when the scene-sentence pairings got switched. This finding was consistent with two explanations: a. infants were able to link verbs to event concepts, and b. infants were simply tracking the surface-level mapping between scenes and sentences. In Exp.2, we investigated these two possibilities, and found that 14-month-olds were sensitive to any mismatch, whereas 18-month-olds dishabituated only to a mismatch that involved a meaning change. These results suggest that the verb-event link may be in place as early as 18 months for English-learning infants.

Session B--Terrace Lounge

Acoustic Correlates of Information Structure in Child and Adult Speech

Jill Thorson, Brown University
James Morgan, Brown University

How do children represent new, given, and contrastive information in their own speech? The motivation for this study is to examine acoustic correlates of intonation employed by child and adult speakers of English. During a semi-spontaneous speech task designed as an interactive game, we elicited a set of target nouns and labeled them as one of these three types. Data show that toddlers as young as 2;6 demonstrate the same pitch accent distributions and frequencies as adults for both new and contrastive information, but do not deaccent given information at the same rate as adults. Additionally, analyses of duration, maximum F0, average F0, and intensity for three types of accentuation (deaccented, H* and L+H*) revealed that children show comparable differences between each type of accentuation along all four acoustic dimensions in relation to the adults.

Session C--Conference Auditorium

Cognitive Limitations Impose Advantageous Constraints on Word Segmentation

Katarzyna Hitczenko, Yale University
Gaja Jarosz, Yale University

We present computational simulations supporting the hypothesis that language learning may be partially shaped by children's cognitive limitations. We examine the effect of two cognitive limitations - incremental processing and memory constraints - and show how both improve outcomes in the word segmentation domain. We do so by analyzing the properties of various learning algorithms. We first compare an incremental learner proposed by Venkataraman (2001) to a batch version of Venkataraman's learner. While Venkataraman's incremental learner performs well, the batch version drastically undersegments. We identify the properties of the probability model responsible for undersegmentation and show how incremental processing imposes an opposing pressure. We then compare both learners to their memory-restricted counterparts and show how memory constraints also lead to improvements. We show that cognitive limitations fundamentally alter the learning task and can advantageously affect learning. These results indicate that cognitive limitations may play a crucial role in language learning.

Notes

PLENARY ADDRESS

Prosodic effects on the emergence of grammatical morphemes: Evidence from perception and production

Katherine Demuth
Macquarie University

Researchers have long observed that children's early use of grammatical morphemes is highly variable. It is generally thought that this is due to incomplete syntactic or semantic representations. However, recent crosslinguistic research has found that the variable production of grammatical morphemes, such as articles and verbal inflections, is prosodically and phonologically conditioned. Thus, children are more likely to produce (and perceive) grammatical morphemes in simple 'unmarked' phonological contexts compared to those that are more complex. This suggests that some of the variability in children's perception and production of grammatical morphemes may be due to phonological context effects, and that some aspects of children's syntactic/semantic representations may be in place earlier than often assumed. This raises important theoretical and methodological issues for investigating syntactic knowledge in L1 acquisition, but also in bilinguals, L2 children and adults, and those with SLI and hearing loss. Implications for understanding the mechanisms underlying language processing, as well as speech planning and production, are discussed.

Notes

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POSTER SESSION II

Definiteness as uniqueness in L2 online processing

Hyunah Ahn, University of Hawai'i - Manoa

POSTER SESSION II

Generic interpretations among Korean-learning 3-year-olds

Jieun Bang, Chung-Ang University
Narae Ju, Chung-Ang University
Youngon Choi, Chung-Ang University

This study examined the generic markers of a SOV language, Korean, and inferences made based on generics among children to explore the effect of language and age in development of generic understanding. Korean-learning 3-year-olds were presented with generic statements about properties of novel animals using the morphosyntactic features of generic NPs (those observed from Korean adults' generic NPs). We observed the extent to which the children extended the property to a novel instance of the kind. Furthermore, evidential strength (the number of exemplars presented with generic statements) and the presence of exception were manipulated to see if these factors affect children's generic inferential abilities. The results were similar to English-learning 4-year-olds, showing that Korean-learning 3-year-olds' generic interpretations were not dependent on evidential strength and could include exceptions. These findings suggest that the development of generic interpretation is quite robust as early as 3 years of age, regardless of language.

POSTER SESSION II

How Czech children comprehend verb number morphemes: singular and plural show different relation with age

Veronika Bláhová, Academy of Sciences of the Czech Republic
Filip Smolík, Academy of Sciences of the Czech Republic

Studies in English and Spanish suggested that 3- to 5-year-old children have problems comprehending verb number, even though they produce verb singular and plural forms appropriately. Moreover, English-learning children comprehended singular forms better, while children acquiring Spanish had better comprehension in plural. The present study examined comprehension of singular and plural verb forms in Czech, a morphologically rich pro-drop language. Forty-six children aged 3;4 to 4;9 heard 16 sentences with omitted subjects and the verb in a singular or plural form. Results suggested an interaction between age and comprehension. Plural sentences were comprehended with slightly above-chance accuracy in all ages. The comprehension of singular sentences improved clearly with age. The findings are in line with previous findings from Czech, and contrast with findings from other languages. The authors suggest that the task may be influenced by pragmatic factors more than grammatical development.

Notes

POSTER SESSION II

Predicting grammatical morpheme production in children with and without Specific Language Impairment: Can sustained attention help?

Tessel Boerma, Utrecht University
Mona Timmermeister, Utrecht University
Paul Leseman, Utrecht University
Frank Wijnen, Utrecht Institute of Linguistics OTS, Utrecht University, University of Utrecht, Utrecht Institute of Linguistics OTS
Elma Blom, Utrecht University

Montgomery (2008) observed involvement of sustained attention, composed of the ability to maintain attention and inhibit prepotent responses, in the processing of grammar by children with SLI. We investigated whether these findings extend to the production of grammatical morphemes, a core area of impairment in SLI (Schwartz, 2009). In addition, we decomposed sustained attention into maintenance of attention and response inhibition to determine which component had most predictive value on the accurate use of grammatical morphology.

The results of our study reveal that sustained attention, and specifically the ability to maintain attention, affects accurate use of grammatical morphology in children with SLI, but not in TD children. Previous research has shown that weak sustained attention in children with SLI leads to slower sentence processing and even failure to process incoming language (Montgomery, 2008). Conceivably, morphological problems of children with SLI reflect their weakened ability to maintain attention to language input.

POSTER SESSION II

Brain responses to cross-modal semantic priming in Italian twenty-month-olds

Chiara Cantiani, Scientific Institute, IRCCS Eugenio Medea, Bosisio Parini, Lecco, Italy
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Giulia Melesi, Scientific Institute, IRCCS Eugenio Medea, Bosisio Parini, Lecco, Italy AND Department of Psychology, University of Milano-Bicocca
Cecilia Marino, Scientific Institute, IRCCS Eugenio Medea, Bosisio Parini, Lecco, Italy

Children begin to establish lexical–semantic representations during their first years of life. At the neurophysiological level, lexical-semantic processing is reflected in the N400 component of event-related brain potential (ERP). In the present study, we investigate the brain mechanisms responsible for the N400 effect elicited by incongruous words and non-words in 20-month-old Italian toddlers, with the aims of: 1) testing an electrophysiological procedure for assessing word comprehension and recognition in very young children; 2) investigating whether typically developing children of the same chronological age (20 months), but of different vocabulary sizes, perform differently in such a comprehension task. The results suggest different brain responses to incongruous words and non-words in picture context in 20-month-olds. In addition, the preliminary results reveal that very early neural mechanisms underlying N400 generation are not related to the infants' state of behavioral language development in this age range of high interest for vocabulary development.

Notes

POSTER SESSION II

The syntax-semantics mapping in the acquisition of complex numerals in 4- to 6-year-olds

Pierina Cheung, University of Waterloo
Meghan Dale, Queens University
Mathieu Le Corre, The Universidad Autónoma del Estado de México

Many languages have complex number words (CNWs) that express multiplication. We ask whether these CNWs are generated by an abstract "multiplication schema." For example, are English CNWs like "two hundred" generated by a schema that maps the surface form UNIT MULTIPLIER onto the meaning UNIT X MULTIPLIER? English- and Cantonese-speaking 4.5 to 6.5 year-olds were trained to map a novel CNW that fit their language's multiplication schema (in English, "one gobi") onto sets of 3. A comparison group of English-speaking children learned a novel CNW that violated the English schema ("gobi one"). After training, we tested whether children generalized to combinations with "two" (e.g., "two gobi" = 6). 40% (English) to 58% (Cantonese) of children in the test group generalized, whereas only 10% of the comparison group did so. This suggests that, by age 4.5, multiplicative CNWs are generated and interpreted with an abstract multiplication schema.

POSTER SESSION II

Raising over an Experiencer in English L2 Acquisition

Jinsun Choe, Hankuk University of Foreign Studies

This study investigates whether adult L2ers of English comprehend English raising constructions over an experiencer (e.g., John seems to Mary to be happy). A Truth-Value Judgment Task was employed to test 30 Korean L2ers of English (ages 19-30, M=21.6), whose English proficiency was measured via a C-test, and 35 native English speakers. The results suggest that L2 adults have difficulty in comprehending such structures, as in child L1 acquisition (e.g., Hirsch, Orfitelli & Wexler, 2007), and that more advanced L2 learners exhibit higher levels of competence. These findings are consistent with and predicted by the Markedness Differential Hypothesis (Eckman, 1977, 2004), as English raising over an experiencer is a cross-linguistically highly marked phenomenon.

POSTER SESSION II

Five-year-olds consider the source accuracy in their evidential reasoning

Youngon Choi, Chung-Ang University
Jieun Bang, Chung-Ang University
Eun-ju Jung, Chung-Ang University
Narae Ju, Chung-Ang University
Minji Nam, Chung-Ang University

The present study examined Korean-learning 4-5-year-olds' evidential reasoning (judging information certainty based on the evidentials) abilities when the reliability about the source of hearsay (i.e., informant's accuracy) was available to them. Prior research showed that evidential reasoning does not develop until 6 years. However, unlike prior findings, 5-year-olds could select information via direct observation as a more reliable one than hearsay, when the source of hearsay was unreliable (after observing the original informant named objects inaccurately). In contrast, their selection was at chance when comparing direct observation with hearsay from an accurate source (after observing the source informant always provided correct names for objects). Four-year-olds, however, were unable to consider the source accuracy in their evidential reasoning overall. These results suggest that children's evidential reasoning ability may develop earlier than has been suggested, and that 5-year-olds can even factor in the reliability of hearsay source in their evidential reasoning.

POSTER SESSION II

Testing native and nonnative knowledge of the licensing conditions of Chinese *wh*-existentials

Wei Chu, University of Hawai'i - Manoa
Bonnie D. Schwartz, University of Hawai'i - Manoa

This study investigates knowledge of the licensing conditions of Chinese *wh*-existentials in adults, both L2ers of Chinese, whose L1 is Korean or English, and Chinese natives. The purpose is two-fold: (i) to examine Chinese natives' actual performance against theoretically asserted *wh*-existential licensing constraints; (ii) to determine the role of L1 lexical properties in the L2 development of *wh*-existentials. *Wh*-words in Chinese and Korean can occur in (*yes/no*-)questions and conditional protases as existentials (Gil & Marsden, 2013), whereas *wh*-words in English never function as existentials. Intermediate and advanced L1-English (n=42) and L1-Korean (n=41) L2ers as well as Chinese native controls (n=30) completed an acceptability-judgment task comprising 30 experimental items and 30 fillers. Results show: (i) Chinese natives allowed the existential reading less often in the *Yes/No*-Question Condition than in the Conditional Condition; and (ii) L1-Korean groups outperformed L1-English groups in both conditions, suggesting transfer of L1 lexical knowledge (e.g., Sprouse, 2006).

Notes

POSTER SESSION II

The Syntax and Semantics of Free Relative Clauses in Child English

Michael Clauss, University of Massachusetts - Amherst

Here I present data which shows that children's knowledge of the syntax of English Free Relative Clauses (FRCs) is not fully adultlike by age 6. Children's knowledge of two key differences between FRCs and embedded Wh questions are examined: that they definite descriptions and not questions, and that they disallow Wh-NP sequences. Experiment 1 compares children's responses to questions which embed Wh questions; children (mean age 5;6) will give a significant number of non-matrix answers to the former but never to the latter, demonstrating that FRCs are treated as semantically distinct. Experiment 2 compares children's truth value judgments of embedded clauses with and without Wh-NP sequences; while adults will interpret only the former as definite descriptions, children (mean age 6;4) do not distinguish the two. I suggest that this is because children assume a maximally general Wh-movement rule before learning this idiosyncrasy of FRCs.

POSTER SESSION II

Pronoun resolution in L2 discourse: evidence of the time course from eye-tracking

Carla Contemori, Pennsylvania State University
Giuli Dussias, Pennsylvania State University

Notes

POSTER SESSION II

Production of cleft sentences in Italian-speaking children across different types of task

Giorgia Del Puppo, University of Venice
Margherita Pivi, University of Venice
Anna Cardinaletti, University of Venice

We investigate the elicited production of subject and object contrastive cleft sentences, (1) and (2), in Italian-speaking children aged 6 to 10 and in a group of adults:

1) It is the DOG that is frightening the rabbit!
2) It is the BEAR that the donkey is washing!

We ran two correction experiments, one in which clefts were primed and one in which participants received no priming. Moreover, participants were administered a repetition task of object clefts and a who-questions production task. Subject clefts were used by children (39% non-priming experiment vs. 67% priming experiment). Object clefts were hardly ever used, but reached high accuracy in repetition (92%). The wh-questions task elicited object cleft questions (3), (3.5%):

3) Who is it that the child is washing?

School-aged children have competence of argumental clefts. The use of different types of tasks allows us to observe different aspects of the same structure.

POSTER SESSION II

The language abilities of bilingual internationally adopted children: Three case studies

Audrey Delcenserie, McGill University
Fred Genesee, McGill University

The language abilities of three bilingual Chinese adoptees who were acquiring French and English from the time of adoption were compared to those of three monolingual French-speaking Chinese adoptees and three non-adopted monolingual French-speaking controls matched on gender, socioeconomic status, and length of exposure to French.

The bilingual adoptees performed significantly lower than the non-adopted controls on vocabulary, grammar, and sentence recall, but did not differ from the monolingual adoptees on vocabulary and grammar. However, the bilingual adoptees performed significantly lower than monolingual adoptees on sentence recall (see Bialystok, 2009 for similar results with non-adopted bilinguals).

The lack of significant differences between the monolingual and bilingual adoptees suggests that attrition and delayed language exposure do not impede adoptees from learning two languages simultaneously. However, the bilingual adoptees' significantly lower performance on sentence recall in comparison to the monolingual adoptees suggests that attrition/delayed language acquisition might increase the effects of bilingualism on verbal memory.

POSTER SESSION II

Learning Constraint Violations Directly from Data: An Emergentist Model of Phonology

Gabriel Doyle, University of California - San Diego
Klinton Bicknell, Northwestern University
Roger Levy, University of California - San Diego

POSTER SESSION II

Infants' cross-situational learning of minimally different words depends on the type and magnitude of the phonological contrast

Paola Escudero, University of Western Sydney, The MARCS Institute
Karen Mulak, University of Western Sydney, The MARCS Institute
Haley Vlach, University of Wisconsin - Madison

Ninety-six infants completed a cross-situational learning task where they viewed two images on a screen while the names corresponding to the images played in random order. During test, participants were presented with consonant (e.g., /bɔn/ - /dɔn/) and vowel minimal pairs (e.g., /dɪt/ -/dʊt/). They were randomly assigned to one of three conditions that differed in type and magnitude of phonological contrast between minimal pair items. Results show that infants had higher target fixation for consonants contrasts involving voicing distinctions than place distinctions, while they had higher target for vowel contrasts with two-features (height+backness) compared to one-feature contrasts. Our findings demonstrate that infants can attend to phonological detail during implicit word learning, but that this ability is constrained by the type and magnitude of the phonological contrast. Both consonant and vowel contrasts were learned across ages, suggesting that previous findings showing vowel versus consonant asymmetries and higher difficulty at 14 months may only apply to explicit paradigms.

Notes

POSTER SESSION II

Trading off robust information transmission in language learning and language structure

Maryia Fedzechkina, University of Pennsylvania
Elissa L. Newport, Georgetown University
T. Florian Jaeger, University of Rochester

We argue that grammatical properties of languages that are beneficial for efficient information transmission can at least in part originate during learning. We exposed learners to one of the three miniature languages with optional case-marking, which occurred independently of word order (WO). The input languages differed in the amount of uncertainty about grammatical function assignment: low uncertainty (fixed WO language), medium uncertainty (flexible WO language), and high uncertainty (random WO language). We found that learners were more likely to use case, the more informative it was in the input (random > flexible > fixed WO). Learners of the non-fixed-WO languages were likely to introduce asymmetric case-marking. Overall, despite considerable variability in individual strategies, learning outcomes were guided by a single underlying principle of trading off robust information transmission and effort. These results parallel typological data and provide a tentative explanation of language change based on biases operating during language acquisition.

POSTER SESSION II

The acquisition of native assimilation rules: evidence from event-related potentials

Mathilde Fort, Universitat Pompeu Fabra, University Pompeu Fabra, Center for Brain and Cognition
Perrine Brusini, Scuola Internazionale Superiore di Studi Avanzati (SISSA), Language, Cognition and Development Lab
Julia Carbajal, Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique
Ghislaine Dehaene-Lambertz, INSERM and LPPS, Neurospin
Sharon Peperkamp, Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique

In French, voiceless obstruents can be voiced when they are followed by a voiced obstruent. Previous research has shown that French 24-month-olds have acquired this voicing assimilation rule: like adults, they compensate for assimilation-induced voicing changes to retrieve the intended words. Would younger infants likewise compensate for voicing assimilation? We tested 14-month-old French-learning infants in a mismatch paradigm, using pseudo-words. At this age, infants have acquired their native phonological categories but they do not know many words yet. EEG measures showed a Mismatch Negativity (MMN) for voicing changes, regardless of whether it occurred in a context for assimilation (e.g. [ikdo] - [igdo]) or not (e.g. [ikmo] - [igmo]). This contrasts with adults behaviour who were reported to exhibit a MMN only in unviable context for assimilation. Thus, at 14 months of age, infants do not yet compensate for voicing assimilation, showing that they still have to acquire this rule.

Notes

POSTER SESSION II

The acquisition of co-referential properties of pronouns in bilingual and L2 Spanish speakers

Estela García-Alcaraz, Universitat Pompeu Fabra
Mònica Tarrés, Universitat Pompeu Fabra
Andrea Biró, Universitat Pompeu Fabra
Aurora Bel, Universitat Pompeu Fabra

Spanish and Moroccan Arabic (MA) share similar pronoun resolution biases: null pronouns (NPs) for [-Topic Shift] and Overt Pronouns (OPs) for [± Topic Shift] (Filiaci 2011; Bel & García-Alcaraz, 2014). Research couched in the Interface Hypothesis (IH) suggests that L2 learners and bilinguals overaccept OPs as [-Topic Shift]. We study whether MA speakers mirror natives in their pronominal choices in Spanish or adhere to the IH's predictions.

Three groups were tested: 26 Spanish-MA bilinguals, 34 L2 advanced learners of Spanish and 34 controls. An acceptability judgment task with three conditions was designed: pronoun (NP vs. OP), antecedent (subject [-Topic Shift] vs. object [+Topic Shift]) and clause order (main-subordinate vs. subordinate-main).

Results reveal: 1) In L1 Spanish, a specialization of OPs for [+Topic Shift] in both orders, and NPs for [-Topic Shift] only in subordinate main order. 2) No group effect, suggesting a native-like achievement with residual optionality in some conditions.

POSTER SESSION II

Intra-clausal Prosodic Boundary Placement as a Window into Children's Speech Planning

Zara Harmon, University of Oregon
Melissa Redford, University of Oregon
Laura Dilley, Michigan State University

Developmental changes in linguistic knowledge predict changes in the temporal extent of speech planning, which has been shown to influence pausing. In this study, we investigate the effects of syntactic planning development on prosodic phrasing in children's structured spontaneous speech. We hypothesize that syntactic and prosodic units become better aligned as syntactic knowledge or syntactic planning abilities develop with age. Specifically, we predict that the distribution of prosodic boundaries within a clause relative to syntactic constituents will be more appropriate as a child's language output becomes more syntactically complex. Our results suggest that children's prosodic boundary placement improves with age. This improvement may imply a change in the chunking strategy, which in turn may be due to increasing syntactic knowledge or syntactic planning abilities.

POSTER SESSION II

Prosody as a Cue to Hierarchical Structure for Toddlers and Adults

Kara Hawthorne, University of Alberta, University of Arizona
Lauren Rudat, University of Alberta
LouAnn Gerken, LouAnn Gerken

Learning that sentences comprise small constituents embedded in larger ones is a critical task facing young language learners. We present results showing that toddlers and adults can use prosody to simultaneously discriminate between constituents and non-constituents at multiple levels of the prosodic hierarchy when listening to an artificial grammar with modifier + clause prosody (A, BC'DE, where a comma indicates an Intonational Phrase boundary and a quote indicates a Phonological Phrase boundary). This is evidence that prosody can be used to bootstrap into an embedded, hierarchically-organized grammar. With clause + modifier prosody (AB'CD, E), however, participants could track Phonological Phrase-level, but not Intonational Phrase-level, constituents. This suggests that prosodic bootstrapping is more effective for certain constructions, even when prosodic boundary strength is the same across construction type.

POSTER SESSION II

Regularization or Probability-Matching? Acquisition of Inconsistent Gender Marking in Fering-Speaking Children

Alison Hendricks, Pennsylvania State University
Karen Miller, Pennsylvania State University
Carrie Jackson, Pennsylvania State University

Research indicates that adults learn probabilities of inconsistently occurring forms in a language, while children regularize input (Hudson Kam & Newport, 2005). Yet, sociolinguistic research shows that children replicate the probabilistic structure of their caregivers (Smith, et al., 2007, 2009; Miller, 2013). Past studies have investigated acquisition of unpredictable probabilistic input in artificial languages, while predictable variation has been studied in natural languages. However, no studies have examined unpredictable variation in naturalistic settings. This study investigates children's acquisition of inconsistent gender marking in Fering, a dialect of North Frisian. The results of a gender elicitation task from 13 adults and 29 children (ages 6-10) from two input groups show that regularization of inconsistent input depends on input quantity. Children with less input regularize inconsistent input. However, high-input children faithfully acquire adult-like patterns, suggesting that regularization seen in Hudson Kam and Newport (2005, 2009) may represent early stages of learning.

Notes

POSTER SESSION II

Syllable weight and stress provide similar information for word segmentation

Mark Johnson, Macquarie University
John Pate, Macquarie University
Benjamin Börschinger, Macquarie University, Institut für Computerlinguistik, Universität Heidelberg, Germany
Katherine Demuth, Macquarie University

One of the first skills a child must develop during language acquisition is the ability to segment speech into words. Stress has long been recognized as a useful cue for English word segmentation, following the observation that words in English are predominantly stress-initial (Cutler and Carter, 1987), together with the result that 9-month-old English-learning infants prefer stress-initial stimuli (Jusczyk et al., 1993). Previous computational work has relied on pronouncing dictionaries to mark vowels as stressed (Doyle and Levy, 2013; Christiansen et al., 1998; Yang, 2004; Lignos and Yang, 2010), which overstates the usefulness of stress for two reasons. First, mono-syllabic function words are usually unstressed in real speech, but pronouncing dictionaries typically list them as stressed. Second, stress identification itself involves a non-trivial learning problem. We present computational modeling experiments using state-of-the-art adaptor grammars (Johnson et al., 2007) that show 1) stress provides information about word segmentation even if no function words are stressed, and 2) all the information our models recover about word segmentation from stress is also recovered by distinguishing heavy from light syllables.

POSTER SESSION II

Learnability in the acquisition of the English tough construction by L1-Korean adult/child L2 learners

Kitaek Kim, University of Hawai'i - Manoa
Bonnie D. Schwartz, University of Hawai'i - Manoa
William O'Grady, University of Hawai'i - Manoa

In the English tough construction (TC), knowledge of tough movement is necessary for target performance (the object-interpretation only; e.g., Johni is easy to see ei). Acquisition of the English TC raises a learnability problem for L1-Korean L2ers: (i) Korean surface equivalents of English TCs have a strong subject-interpretation bias (Kim, 2014); (ii) no input dictates that the subject-interpretation is disallowed in English TCs; (iii) no classroom instruction covers English TCs. For the Fundamental Difference Hypothesis (Bley-Vroman, 1990), L2 children—but not L2 adults—can overcome this learnability problem.

L1-Korean adult (n=49) and child (n=30) L2ers' knowledge of English TCs was assessed via Truth-Value Judgment Tasks manipulating (i) verb transitivity to make the infinitival object gap more vs. less salient and (ii) context to avoid vs. strengthen bias toward the (erroneous) subject-interpretation. Notably, some high-proficiency adult L2ers showed significantly-above-chance performance, despite the error-inducing manipulations, suggesting that adult L2ers can overcome the learnability problem.

Notes

POSTER SESSION II

Intonation and lexicosyntax in turn projection by Dutch and English toddlers

Imme Lammertink, Radboud University Nijmegen
Titia Benders, Radboud University Nijmegen
Marisa Casillas, Max Planck Institute for Psycholinguistics
Brechtje Post, Cambridge University
Paula Fikkert, Radboud University Nijmegen

Successful coordination during conversation requires adult speakers to predict upcoming turn transitions with lexicosyntactic and prosodic cues. Here we examined the weighting of these cues for turn-projection in Dutch and British-English toddlers. We tracked the anticipatory eye-movements of 20 Dutch and 20 English two-year-olds, and 16 Dutch and 20 English adult controls as they watched videos of dyadic puppet conversation. Target sentences were controlled for lexicosyntactic and intonational cues to turn completion (incomplete=hold and complete=yield), resulting in four types of target sentences (fully incomplete, incomplete syntax, incomplete intonation, and fully complete). Cues conflicted in two conditions (incomplete syntax and incomplete intonation) to test for their relative primacy. We found that Dutch and English toddlers and adults used both lexicosyntactic and intonational cues in their anticipation of upcoming speaker changes, but weighted lexicosyntactic cues over intonational ones when the cues are pitted against each other.

POSTER SESSION II

The Role of Language in Object Individuation and Identification: Insights from the Acquisition of Partitive Expressions

Peggy Li, Harvard University
Pierina Cheung, University of Waterloo
Katie Aguayo, Boston College
Susan Carey, Harvard University

The acquisition of nouns at 12-months-old plays a causal role in children's developing ability for object individuation and identification, leading children to use kind information in identifying whether an object (duck) is the same one they had previously seen (ball) (Xu, 2007). The use of within-kind properties (e.g., the red cup cannot be the same cup as the blue cup seen earlier) develops even later, leading to the question of whether acquiring more complex noun phrases helps children make use of within-kind properties for identification. The present study focuses on preschoolers who treat wholes and parts alike linguistically (a piece of a fork is called "a fork"), asking whether learning partitive language helps with reasoning about the number and identities of objects as wholes and pieces. While children were above chance in remembering the identities of objects, those who have acquired partitive language were better at reasoning about the number and identities of objects, suggesting that encoding object properties with language is helpful for object individuation and identification.

POSTER SESSION II

The acquisition of sentence ellipsis in Dutch preschoolers

Charlotte Lindenbergh, University of Groningen
Angeliek van Hout, University of Groningen
Bart Hollebrandse, University of Groningen

We investigated the acquisition of Dutch sentence ellipsis, i.e. sluicing. In sluicing a whole TP is elided, as in: *Someone is drawing a flower, but I can't see who ~~[is drawing a flower]~~*. Do children produce sluices, and how do they reconstruct their meaning? We developed a novel paradigm to test sluicing comprehension and production. 30 Dutch preschoolers (μ 5;4) were at ceiling in comprehension, and produced many sluices (67%). We conclude that Dutch 5 year-olds have no trouble with sluicing, contra Wood (2009) who found that English 5-year-olds did not accept sluicing sentences in a grammaticality-judgment task, whereas 7 year-olds did. Our results do align with studies on NP and VP-ellipsis (Matsuo 2007; Thornton & Wexler 1999; Wijnen, Roeper & Van der Meulen 2004), supporting the view that children at this age are fully able to reconstruct the antecedent of ellipsis by using the linguistic discourse.

POSTER SESSION II

Japanese mothers undo function word reduction when talking to infants

Andrew Martin, RIKEN Brain Science Institute
Keiichi Tajima, Hosei University
Reiko Mazuka, RIKEN Brain Science Institute, RIKEN Institute

Notes

POSTER SESSION II

The interplay between L1 and L2 phonotactics in sequential bilingual children

Kathleen McCarthy, University College London
Katrin Skoruppa, University of Essex

Research has shown that monolingual children acquire the phonotactic rules of their ambient language within the first year of life. However, little is know about how these skills develop in bilingual children, in particular in children growing up learning two languages sequentially. The current study investigates the interplay between L1 and L2 phonotactics in L2 non-word repetition by 27 Sylheti-English speaking sequential bilingual children (mean age: 5;3 years old). Children were required to repeat pairs of CCVC non-words whose phoneme sequences differed in their phonotactic probability in the two languages. Overall, the children produced fewer errors in high probability L1 and L2 phoneme combinations than they did for low probability phoneme combinations. Interestingly, the phoneme combinations with high probability in both languages were produced with the least number of errors. These results will be discussed in the light of the children's phonetic category development and language exposure.

POSTER SESSION II

Gender Information of Possessive Pronouns: How Does It Work in Child English?

Terue Nakato, Kitasato University

The aim of this paper is to investigate whether English-learning children use gender information of possessive pronouns in their interpretation. This paper presents experimental data which suggest that children, even around the age of seven, do not necessarily use gender information.

The target sentences are divided into two types depending on whether or not the gender of a possessive pronoun matches that of the subject.

(1) a. Gender Mismatch (GMM) Condition:
Bluei (=girl) is pinching her nose.
Is Greenj (=boy) pinching heri/*j nose, too?
b. Gender Match (GM) Condition:
Orangei (=boy) is combing his hair.
Is Greenj (=boy) combing hisi/j hair, too?

Our results show that children make no difference between (1a) and (1b): Rather, partly due to their preference for a distributive interpretation, they tend to assign a bound interpretation to a possessive pronoun even under the GMM condition. This can be taken as another instance of the Delay of Principle B Effect.

Notes

POSTER SESSION II

Awareness and monitoring in children's referential communication

Josefin Nilsson, University of Edinburgh
Kerry Catto, University of Edinburgh
Hugh Rabagliati, University of Edinburgh

Preschool children frequently produce referentially ambiguous descriptions, e.g., calling a red square "the square" despite other squares in the context. This failure has historically been ascribed to egocentricity, but discoveries of children's sophisticated pragmatic abilities cast doubt on this explanation. Psycholinguistic evidence from adults suggests a processing-based alternative, in which children fail to monitor the world for potential linguistic ambiguity. We used eye tracking during a referential communication task to assess potential differences in how adults and 4-to-5-year-old children monitor the world when producing referring expressions. Participants saw three object displays, which varied in whether there was potential ambiguity, and named one object after a preview. Adults, who were rarely ambiguous, frequently saccaded between potentially ambiguous referents during the preview, suggesting they monitored for ambiguity. For children, this pattern of saccades was only present when they later produced an unambiguous expression, suggesting that they were failing to monitor for ambiguity.

POSTER SESSION II

The interpretation of Japanese pronouns by L1 English and L1 Spanish speakers

Tokiko Okuma, McGill University

The Overt Pronoun Constraint (OPC) in Montalbetti (1984) suggests that overt pronouns cannot take bound variable interpretations in null subject languages. In Spanish, the OPC is operative only when null and overt pronouns alternate, such as in subject positions. In Japanese, it is operative in both subject and object positions.

L1 English or L1 Spanish speakers of L2 Japanese were compared to native Japanese controls in interpreting the Japanese pronoun kare in subject and object positions. Either L2 group accurately rejected pronouns with quantified antecedents, suggesting that they had already acquired the OPC. However, the intermediate L1 Spanish group was more target-like than the intermediate L1 English group in making a distinction between quantified and referential antecedents in interpreting subject pronouns. This advantage of the Spanish group over the English group disappeared in interpreting object pronouns. These results support the Full Transfer/Full Access Hypothesis (Schwartz & Sprouse, 1996).

POSTER SESSION II

Mechanisms Underlying Toddlers' Processing of Disfluent Speech

Adriel John Orena, McGill University
Katherine White, University of Waterloo

Speech disfluencies can convey information to listeners. When listeners hear fillers (e.g., uhh), they expect upcoming referents to be new to the discourse or difficult to describe. In adults, this expectation is in part due to an understanding that disfluencies reflect processing difficulties. We asked whether children's (40-44 months) predictive use of disfluencies similarly reflects an inference about processing difficulties or instead reflects learned associations between disfluencies and certain types of referents. Children were introduced to either a knowledgeable or forgetful speaker; they subsequently heard this speaker produce fluent and disfluent utterances. Children listening to the knowledgeable speaker looked more at discourse-new/novel objects during disfluent than fluent utterances. However, children listening to the forgetful speaker did not use disfluencies predictively, showing no difference between disfluent and fluent trials. These results suggest that, like adults, young children modify their expectations about the informativeness of disfluencies on a speaker-specific basis.

POSTER SESSION II

Infants' language discrimination of accented speech samples

Melissa Paquette-Smith, University of Toronto
Elizabeth K. Johnson, University of Toronto - Mississauga

Although it is common for infants raised in multilingual settings to be exposed to non-native speakers, language discrimination research has focused exclusively on the discrimination of native-accented language samples. Infants can use rhythm to distinguish stress-timed (e.g., English) from syllable-timed languages (e.g., Spanish), however it is unknown whether infants' discrimination abilities are affected by the nativeness of the speaker. Non-native speakers may carry over some of the timing from their native language into their second language. Experiment 1 investigates English learning 5-month-olds' ability to discriminate English and Spanish language samples produced by a crib-bilingual speaker (no accent in either language) and an ESL speaker. Infants assigned to listen to the crib-bilingual speaker were able to distinguish between the speaker's English and Spanish samples whereas infants assigned to the ESL speaker showed greater difficulty. These findings underscore the importance of considering real-world language variability in models of infant speech perception.

Notes

POSTER SESSION II

Order-of-acquisition effects in the learning of Chinese classifiers

Jing Paul, University of Florida
Theres Gruter, University of Hawai'i - Manoa

In an artificial language learning experiment, Arnon and Ramscar (2012) found that participants exposed to sentences before individual nouns were more successful at learning co-occurrence relations between gender-marked determiners and nouns than participants exposed to sentences after nouns. This study replicated these findings in a natural language, focusing on co-occurrence relations between classifiers and nouns in Chinese. All participants were native English speakers without prior knowledge of Chinese. The sentence-first group (N=24) listened to a block of sentences before a block of nouns, the noun-first group (N=24) vice versa. Results were very similar to those in the original artificial language experiment: The sentence-first group outperformed the noun-first group on a forced-choice task testing knowledge of classifier-noun associations, as well as on the elicited production of correct classifier+noun sequences. The results of this study validate the relevance of order-of-acquisition effects for natural language learning.

POSTER SESSION II

Children's acquisition of complex modification

Ana Teresa Perez-Leroux, University of Toronto
Anny P. Castilla-Earls, State University of New York - Fredonia
Tyler Peterson, University of Arizona
Diane Massam, University of Toronto
Susana Bejar, University of Toronto

Modification makes NPs more complex but it is required in certain contexts. Although sensitive to context, children produce few modified DPs, and resist modifier interpretations in processing. The productivity gap of NP modifiers is not due to utterance length. To tease apart embedding and modification, we elicited doubly modified NPs that differed minimally as to whether the second modifier applied to the higher noun, or recursively modified the first modifier.

(1) [the girl [with a bike [with the ribbon]]]
(2) [the truck [with candles][with a broken wheel]]

Children (aged 4-5, n=50) produced much less complex NPs than adults, but both groups showed an asymmetry between the two types. Children's production of complex NP was correlated to phonological memory, but only for the recursive condition. This supports minimal attachment, an economy-based parsing principle, and suggests that the modification gap is not a pragmatic/referential deficit but depends on the complexity of the structure.

Notes

POSTER SESSION II

Early consonant / vowel asymmetry: Evidence from word recognition in French-learning 11-month-olds

Silvana Poltrock, University of Paris V, CNRS, Laboratoire Psychologie de la Perception
Thierry Nazzi, CNRS - Université Paris Descartes, Laboratoire Psychologie de la Perception, University of Paris V, CNRS, Laboratoire Psychologie de la Perception, CNRS, Laboratoire de Psychologie de la Perception

There has been a growing body of evidence to support the proposal of Nespor et al. (2003) that consonants are more important than vowels for lexical processing. However, while this consonant bias is possibly very stable in adulthood, little is known about its developmental origin. The present HPP study investigates whether French-learning 11-month-olds' already exhibit a consonant bias when recognizing familiar words. In a baseline experiment (Exp. 1), infants preferred listening to familiar words over nonwords confirming that at this age, infants show a familiarity rather than a novelty effect. In Experiment 2, which uses the same familiar words as Experiment 1, infants preferred listening to one-feature vowel-mispronunciations over one-feature consonant-mispronunciations, demonstrating that consonantal alterations impact early word recognition to a greater extent than vowel alterations. This provides evidence that, at least in French, consonants already have a privileged role in lexical processing by 11 months of age.

POSTER SESSION II

A novel, reliable method for investigating Theory of Mind in low-verbal populations: An experiential false-belief task

Jennie Pyers, Wellesley College
Deanna Gagne, University of Connecticut - Storrs
Ann Senghas, Barnard College
Marie Coppola, University of Connecticut - Storrs

To evaluate the impact of language on false belief (FB) understanding in individuals with limited language, we innovated a minimally-verbal, experiential FB measure. We provided participants with experience making mistakes resulting from their own FBs (based on an appearance-reality or unexpected contents error), then asked them to predict another person's behavior in the identical situation. We replicated documented FB differences between first- and second-cohort Nicaraguan Sign Language signers. Ten years later, first-cohort signers' performance remained stable, and they outperformed Homesigners (who have not acquired a language, but have created individual gesture systems) on appearance-reality, but not unexpected contents trials. With minimal language demands, this methodology detects differences in FB understanding between groups with different language experiences and elicits consistent performance over time. Results confirm that language plays a critical role in FB--experiencing a FB is insufficient in the absence of language to correctly

POSTER SESSION II

Why are Infants Precocious Language Learners? Implications for Adult Second-Language Learning

Carolyn Quam, University of Arizona
Kimberly Golisch, University of Arizona
Andrew Lotto, University of Arizona
LouAnn Gerken, University of Arizona

We propose that two factors interact to cause adults' rigidity in second-language learning: native-language biases about which dimensions are relevant (e.g., Flege, 1995) and full access to explicit-learning abilities, which are less developed in infancy (Jones & Herbert, 2006) and impair adults' ability to integrate multiple dimensions (e.g., Filoteo et al., 2010). We taught 56 adults synthesized-vowel categories varying on a native-language dimension (F2, which contrasts /i/-/u/ in English) and a non-native dimension (pitch). We crossed two factors: native- vs. foreign-language context and blocked vs. intact explicit learning. Adults reduced reliance on the native dimension in favor of the non-native dimension when access was blocked to both native-language biases ($F(1,52)=61.53$, $p<.001$) and explicit-learning strategies ($F(1,52)=5.52$, $p<.05$). The two factors also interacted: taxing working memory decreased reliance on the native dimension only in the foreign-language condition ($t(25.79)=2.51$, $p<.05$). This has the potential to inform the development of more efficient second-language instruction.

POSTER SESSION II

Negative Sentences in Children with SLI

Kelly Rombough, Macquarie University
Rosalind Thornton, Macquarie University

The interaction of Tense and negation is investigated in children with SLI by eliciting negative sentences in contexts where adults prefer to use 'doesn't' (e.g. Ernie doesn't fit). 21 children with SLI (mean age = 5;3 years), 21 Age Equivalent children (mean = 5;5), and 21 Language Equivalent children matched by MLU (mean = 3;7) participated in the study. The children in the control groups produced adult-like negative sentences with 'doesn't', while 16 of the 21 SLI children produced nonadult structures such as Ernie not fit, Ernie not fits, Ernie's not fit, Ernie's not fits etc., forms seen in 2-year-old children's productions. SLI children's nonadult negative sentences are analysed as the product of a protracted stage in which the only form of negation is the adverb 'not'. Once the children with SLI analyse the morpheme 'n't' as a head form of negation, they use 'doesn't' and the nonadult variants disappear.

Notes

POSTER SESSION II

Overgeneration of indefinite articles in Autism and SLI

Jeannette Schaeffer, University of Amsterdam
Merel Van Witteloostuijn, University of Amsterdam
Doatske De Haan, University of Amsterdam

This study reports experimental data on the choice between a!definite and an indefinite article by Dutch-speaking children with High Functioning Autism (HFA) and children with Specific Language Impairment (SLI). Article choice depends on speaker/hearer assumptions and is thus part of pragmatics. The definite article is used when the referent is known to both speaker and hearer, while the indefinite article is required when only the speaker (referential), or neither speaker nor hearer (non-referential) knows the referent (Heim, 1982; Stalnaker, 1974; 1978). Our results show that none of the children overgenerate the definite article in indefinite contexts. However, subgroups of both children with HFA and children with SLI overgenerate the indefinite article in definite contexts. We propose that these children fail to calculate the pragmatic scalar implicature for definiteness. Despite the HFA and SLI resemblance in terms of article choice, their profiles differ otherwise, suggesting different etiologies.!

POSTER SESSION II

Impact of long-term exposure on infants' word segmentation in infant- and adult-directed speech contexts

Melanie Steffi Schreiner, University of Göttingen
Nicole Altvater-Mackensen, Max Planck Institute for Human Cognitive and Brain Sciences
Nivedita Mani, University of Göttingen, Georg-August Universität Göttingen

A number of studies suggest that the emergence of the ability to segment speech is language-specific and dependent on the speech register. In our recent study, 7.5-month-olds were exposed to a novel word at home over a six-week period in a manner of German infant-directed, or adult-directed speech. In addition, infants were familiarized with another novel word when coming to our lab at 9 months. According to our results, infants were able to segment the words familiarized at home in both infant- and adult-directed speech indicated by longer listening times to these home-familiarized words than to novel control words. However, listening times for lab-familiarized words were not significantly different from those of novel control words suggesting that German infants are able to segment infant- and adult-directed speech and store these segmented words in their long-term memory, however, they seem to need more exposure to do so than English speaking infants.

Notes

POSTER SESSION II

The Power of Baby Talk: Infant-Directed Speech Promotes Word Recognition

Amber Shoaib, University of Notre Dame
Jill Lany, University of Notre Dame

Infants prefer infant-directed speech (IDS) over adult-directed speech (ADS). At 21 months, infants also learn words better when they are produced in IDS versus ADS, but the specific role of IDS in lexical development remains unclear. We hypothesized that the prosodic qualities of IDS promote encoding word forms. Thus, we tested 21-month-olds' ability to encode familiar words in both registers when pronounced correctly, and when mispronounced. Infants found the referent of these words as easily when they were correctly pronounced in both IDS and ADS. Infants were faster to find referents when labels were correctly pronounced vs. mispronounced in ADS, while infants were only marginally faster for correct pronunciations in IDS. Thus, by 21-months, the advantages of IDS are restricted to novel word learning, as infants can encode familiar words in IDS and ADS. IDS may be more relevant for novice learners whose lexical representations are fragile.

POSTER SESSION II

Pronoun Interpretation in the Second Language: DPBE or not?

Roumyana Slabakova, University of Southampton, and University of Iowa
Lydia White, McGill University

The Delay of Principle B Effect (DPBE) is a well-known interpretive phenomenon in L1 acquisition, with children performing at chance when interpreting pronouns, while showing no delay with reflexives. Hartman, Sudo & Wexler (2012) have recently established that English-speaking children are significantly more adult-like when pronouns are reduced as opposed to full. If DPBE reflects effects of an elevated processing load due to accidental coreference (Reinhart 2006), which is only possible with full pronouns, then similar difficulties might be expected for L2ers. In two separate TVJT experiments, we test pronoun interpretation in Romance-English interlanguage. Intermediate learners show greater accuracy on reduced versus full pronouns with referential antecedents. At the same time, pronouns with quantificational antecedents are interpreted more accurately than referential antecedents, similar to findings for L1 acquisition (e.g. Chien and Wexler 1990). Our results suggest that full pronoun interpretation indeed strains processing resources in L2 acquisition.

POSTER SESSION II

Context and the acquisition of Dutch wh-questions: The effect of topicality and thematic roles.

Iris Strangmann, University of Groningen
Anneke Slomp, University of Groningen
Angeliek van Hout, University of Groningen

The subject-object asymmetry in the acquisition of wh-questions—children acquire subject questions before object question—lasts up to a high age in Dutch children. Even 9-year-olds interpreted unambiguous which-object-questions as subject questions (Metz et-al., 2012; Schouwenaars et-al., 2014). We investigated if discourse context helps the interpretation of object questions such as Welke piraat wassen de indianen? (which pirate-SG wash-PL the Indians-PL). In Experiment 1 the discourse established one of the referents as topic (and topics are typically subjects, hence not objects). In Experiment 2 the context gave the thematic roles "away". Our study confirms the effect of a strong subject-first bias in Dutch children's interpretation of wh-questions: context did not alleviate the difficulties posed by object questions. We argue that the subtle number cues in which-questions create a kindergartenpath: the child's parser does not pick up topicality nor thematic role cues to revise its initial, subject-question interpretation.

POSTER SESSION II

Wh-islands in Child Japanese Revisited

Koji Sugisaki, Mie University
Keiko Murasugi, Nanzan University, University of Connecticut

Theoretical studies on Japanese syntax argue that wh-island effects can be observed even in Japanese, a wh-in-situ language (e.g. Watanabe 1992). Otsu (2007) conducted an experiment to determine whether Japanese-speaking preschool children conform to the relevant UG constraint from the earliest observable stages. The study, however, had a serious flaw in its experimental design. In this study, we conducted a new experiment to overcome this problem and to re-assess Japanese-speaking children's sensitivity to wh-island effects. The results of our experiment, which were obtained through the use of both question-after-story and truth-value judgment tasks, confirmed that Japanese-speaking preschool children indeed obey the UG constraint responsible for wh-island effects. Thus, our results corroborate the findings of previous research which demonstrated children's early sensitivity to wh-island effects in cases of overt wh-movement (e.g. de Villiers, Roeper, & Vainikka 1990), and provide further support for the continuity hypothesis.

Notes

POSTER SESSION II

Comparisons of Implicit Knowledge in Second Language Acquisition: An Eye-tracking Study

Yuichi Suzuki, University of Maryland - College Park
Yi Ting Huang, University of Maryland - College Park
Robert DeKeyser, University of Maryland - College Park

Unlike L1 acquisition, adult L2 speakers often experience substantial difficulties acquiring morphological properties of their second language. The current study investigated whether L2 learning benefits from knowledge of similar structures in L1. Using an eye-tracking paradigm, late L2 English speakers with Chinese L1 were tested on their knowledge of distinctions for definiteness (which does not appear in L1) and mass/count (which does appear in L1). Unlike native speakers, eye-movements of L2 speakers did not distinguish between the felicitousness of definite versus indefinite descriptions in single- and multiple-referent contexts (e.g., put the pig inside *the* can vs. *a* can), regardless of years of experience. In contrast, even L2 speakers with minimal experience were sensitive to the felicitous use of mass versus count descriptions (e.g., two candles vs. *two bacon). These results suggest that L2 acquisition may bootstrap from comparable structures in L1. However, sensitivity to unique features may be more challenging.

POSTER SESSION II

Context helps in learning to segment words: evidence from a modeling study

Gabriel Synnaeve, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS)
Isabelle Dautriche, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS), Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique - CNRS
Benjamin Börschinger, Macquarie University, Institut für Computerlinguistik, Universität Heidelberg, Germany
Anne Christophe, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS), Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique - CNRS
Mark Johnson, Macquarie University
Emmanuel Dupoux, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS)

Past modeling and experimental research on infant word segmentation mainly focused on segmentation cues that can be readily recovered from the speech signal, i.e., statistical regularities, phonotactics, prosody. Yet, speech is also constrained by extra-linguistic semantic context such as places (e.g., bathroom) and activities (e.g., eating). We tested whether having access to these contexts can boost the probability of specific vocabularies and constrain the segmentation of an utterance (at meal times, you expect food vocabulary). We applied topic modeling as a proxy for context on a corpus of child-directed speech, and tested the impact of topics in a word segmentation task building on a state-of-the-art segmentation model (Adaptor Grammars, Johnson, 2007). The topic-augmented model outperformed a baseline model without topic information. We conclude that extra-linguistic contexts, an information naturally available to children, helps in the segmentation process, but also presumably in the acquisition of word meanings

Notes

POSTER SESSION II

Small Differences in Age of Acquisition Reduce Tip-of-the-Tongue Rates in Bilinguals

Andrea Takahesu Tabori, Smith College, Wellesley College
Jennie Pyers, Wellesley College
Tamar Gollan, University of California - San Diego

Relative to monolinguals, bilinguals have a disadvantage retrieving L2 words; they experience more tip-of-the-tongue (TOT) states than monolinguals when naming pictures. Two explanations for this bilingual disadvantage are lexical competition between translation equivalents (Green, 1998) and that bilinguals have a lower frequency of language use relative to monolinguals (Gollan & Acenas, 2004). We compared the L2 retrieval skills of early (L2 AOA: 0-4) and late (L2 AOA = 5-11) English-dominant Spanish-English bilingual adults. Early (n=27) and late (n=22) bilinguals completed: a picture-naming task in their L2 (English), the PPVT in English, and a non-verbal intelligence test, and translated the picture-naming task words into Spanish. The groups did not differ in age, education, non-verbal intelligence, or English proficiency. Early bilinguals experienced fewer TOTs than late bilinguals. Analyses suggest that this difference is not explained by lexical competition from translation equivalents, but rather by cumulative language use as reflected by vocabulary size.

POSTER SESSION II

Lexical access and vocabulary in Turkish and Moroccan child heritage learners in the Netherlands

Mona Timmermeister, Utrecht University
Tessel Boerma, Utrecht University
Paul Leseman, Utrecht University
Frank Wijnen, Utrecht Institute of Linguistics OTS, Utrecht University
Elma Blom, Utrecht University

Various picture naming studies found that bilinguals had slower lexical access than monolinguals. One explanation is that when bilinguals access lexical items in one language, the other language is interfering. Another idea is that the bilingual disadvantage is related to vocabulary size. To investigate whether language interference or vocabulary size cause the bilingual disadvantage, it is necessary to look at bilinguals' vocabularies in both languages. We therefore compared the Dutch picture naming performance of Turkish and Moroccan child heritage learners to that of monolingual Dutch children, taking into account vocabulary scores in both languages. We hypothesized that independent of vocabulary size in the target language Dutch, a larger vocabulary in the heritage language would cause more language interference and therefore lead to slower naming in Dutch. Our results can confirm this hypothesis and demonstrate the need to consider bilinguals' vocabulary knowledge in both languages when investigating their lexical access.

POSTER SESSION II

How morphosyntax is represented in the L2 mental lexicon

Helena Trompelt, Potsdam Research Institute for Multilingualism, Potsdam Research Institute for Multilingualism
Sina Bosch, Potsdam Research Institute for Multilingualism, Potsdam Research Institute for Multilingualism
Harald Clahsen, University of Potsdam, Potsdam Research Institute for Multilingualism, Potsdam Research Institute for Multilingualism

Lexical aspects of a late-learned non-native language (L2) appear to be easier to handle than sentence-level morphosyntax. The present study investigates stem variants of strong verbs in German with respect to this issue. We report results from two behavioral experiments withgroups of advanced late learners as well as native speakers of German.

Although the late bilinguals we tested were highly proficient in German (as revealed by an offline production task), the results of an online priming experiment indicated that the bilinguals process and represent verb forms exhibiting stem allomorphy differently from natives. While the L1 data suggested morphologically structured lexical entries for the different stem variants, late bilinguals seem to represent these forms in an associative schema without morphological structure. We conclude that lexical representations in a late-learned L2 rely less on morphosyntactic feature information than in an L1.

POSTER SESSION II

Syntactic choice in children's production: effects of thematic structure and conceptual accessibility

Mirta Vernice, University of Milan - Bicocca
Maria Teresa Guasti, University of Milan - Bicocca
Claudia Manetti, University of Siena
Holly Branigan, University of Edinburgh

Adult speakers tend to map particular thematic roles onto particular syntactic positions (Ferreira, 1994), but such preferences interact with effects of referents' conceptual accessibility (i.e., animacy; Bock & Warren, 1985). In two Experiments, we asked whether 3-, 4-, and 5-year-olds' syntactic choices in production are similarly determined.

In Experiment 1, we asked Italian children to describe actional and psychological events. Additionally, we manipulated the animacy of the characters partaking to the events. In Experiment 2, we examined the nature of these thematic mappings, by using a structural priming methodology. Participants heard a prime picture description involving an active, passive, unaccusative or experiencer-theme sentence. They then described a semantically unrelated picture showing a theme-experiencer event.

Our findings suggest that children's syntactic choices may be affected by accessibility of individual referents as well as by canonical associations between clusters of particular semantic entailments and syntactic positions.

Notes

POSTER SESSION II

Paradigmatic representations outperform syntagmatic representations in distributional learning of grammatical categories

Mehmet Ali Yatbaz, Koç University, Facebook
Volkan Cirik, Koç University
Aylin Küntay, Koç University, Utrecht University
Deniz Yüret, Koç University

Distributional representations of word contexts are (a) syntagmatic features such as neighboring words (Mintz, 2003; St. Clair et al., 2010), and (b) paradigmatic representations such as words that serve as substitutes in a given context. We tested whether paradigmatic representations wherein word contexts are represented as substitute-word distributions facilitate derivation of grammatical categories more accurately and with sparser data than syntagmatic representations. Using corpora of English child-directed speech from CHILDES (MacWhinney, 2000), we compared the classification accuracy of paradigmatic representations with a syntagmatic representation (flexible frames) (St. Clair et al., 2010). Results of the short and the long training patterns showed that the classification accuracy of the paradigmatic model outperformed the syntagmatic model. When grammatical categorization of words in child-directed speech is approached by anticipating substitute sets in paradigmatic representations, learning is more accurate with less data, and more widespread to include categories such as wh-words and conjunctions.

Notes

POSTER SESSION II

Challenging the "linguistic incompetency hypothesis" - Code-switching positively impacts on lexical development in bilingual preschoolers

W. Quin Yow, Singapore University of Technology and Design
Ferninda Patrycia, Singapore University of Technology and Design

Code-switching, the alternation between two or more languages in the context of a single conversation, is a common practice amongst bilinguals. Although early research interprets instances of bilingual children code-switching as an indication of language confusion and linguistic incompetency, recent case studies suggested that code-switching reflects children's communicative competence in both languages rather than a lack of. This study explored the role of code-switching in language development via a naturalistic observation study with 55 English-Mandarin preschoolers from an English-dominant-multilingual environment. Results revealed that children's amount of code-switched utterances did not negatively impact their English receptive vocabulary, number of different-word-roots-per-minute (NDWR) in English, and mean-length-utterance (MLU) of pure English utterances. Conversely, the amount of code-switched utterances was positively related to children's Mandarin NDWR and Mandarin MLU. This suggested that code-switching reflects bilingual children's communicative competence in their languages and plays a significant role in the lexical development of the less-dominant language.

Notes

POSTER SESSION II

Aspectual marking in Mandarin-speaking children with high-functioning autism

Peng Zhou, Macquarie University
Stephen Crain, Macquarie University
Liqun Gao, Beijing Language and Culture University
Ye Tang, Beijing Language and Culture University

The present study investigated the production of grammatical morphemes by Mandarin-speaking children with high functioning autism. Previous research found that a subgroup of English-speaking children with autism exhibit deficits in the use of grammatical morphemes that mark tense. In order to see whether this impairment in grammatical morphology can be generalised to children with autism from other languages, the present study examined whether or not high-functioning Mandarin-speaking children with autism also exhibit deficits in using grammatical morphemes that mark aspect. The results show that Mandarin-speaking children with autism produced grammatical morphemes significantly less often than age-matched and IQ-matched TD peers as well as MLU-matched TD peers. The implications of these findings for understanding the grammatical abilities of children with autism were discussed.

Notes

POSTER SESSION II

Linguistic and pragmatic ambiguity in quantified expressions: Implications for mathematics teaching and testing of monolingual and bilingual students

Barbara Zurer Pearson, University of Massachusetts - Amherst
Tom Roeper, University of Massachusetts - Amherst
Cara Iacopini, Hampshire College

This paper compares the range of responses to ambiguous "how-many" questions among first- and second-language-speakers of English (L1-E and L2-E). For example, sentences with two numerically quantified expressions (3 boys found 2 balloons) give rise to several interpretations with different numbers of boys holding different numbers of balloons. Likewise, "at least n" is sometimes interpreted as "exactly n" but often as "n or more." It is an empirical question how various linguistic and pragmatic environments influence the set of entities involved. One-hundred-sixty L1-E and 80 proficient L2-E-adults (15-65yrs) filled out a web-based questionnaire with items taken from local and statewide mathematics exams. In general, interpretations of distributivity/collectivity and "at least" in the responses of the L2-E-speakers were more variable than those of L1-E-speakers, and included valid answers to mathematics problems that do not match the answer key. Our findings provide evidence to support explicit teaching of implicit relationships in mathematics.

Notes

Session A--Metcalf Small

Abstract knowledge of non-canonical word order by 21 month olds

Romy Lassotta, University of Geneva
Akira Omaki, Johns Hopkins University
Julie Franck, University of Geneva

Previous research on word order acquisition with children aged 19-22 months (Gertner et al., 2006; Franck et al., 2013) provided evidence for abstract word order knowledge by showing that children correctly interpret canonical SVO sentences with pseudo-verbs. However, performance could be guided by a conceptual Agent-first bias. To address this question, this preferential looking study uses non-canonical OSV word order in French (e.g., "Le garcon, la fille le poune"; "The boy, the girl him pseudo-verb"), compared to canonical SVO order. Eye-tracking results show that French-speaking 21-month-olds (N=40) prefer the SVO over the OVS interpretation (Agent-first) in the canonical condition, whereas in the non-canonical condition, they prefer OSV over SOV (Patient-first; both ps<.01). These findings are incompatible with an Agent-first bias and rather suggest that abstract word order knowledge guides children's early sentence processing, allowing them to master even syntactically complex non-canonical sentences by age 2.

Session B--Terrace Lounge

L2 Learners are Less Sensitive to Competing Alternatives for Novel Utterances

Clarice Robenalt, Princeton University
Adele Goldberg, Princeton University

Certain constructions are partially but not fully productive, even when general syntactic, semantic, and phonological requirements seem to be met. Statistical preemption (Ambridge et al. 2008; Brooks and Tomasello 1999; Goldberg 1995; 2011; Boyd & Goldberg 2011) proposes that what limits a verb's use in a target construction is consistently hearing the verb in a competing construction when the target construction could have been expected. This predicts that lower frequency verbs should be more flexible than higher frequency verbs as has been found (e.g., Brooks et al. 1999; Theakston 2004) but only when the novel use has a readily available paraphrase. We report this predicted interaction for native speakers, but not L2 learners, who instead are less willing to extend higher frequency verbs regardless of whether a competing formulation exists. This suggests that L2 learners do not take competing alternatives into account the way native speakers do when judging acceptability.

Session C--Conference Auditorium

Maturation constrains the effect of exposure in linking language and core conceptual processes in healthy preterm infants

Danielle Perszyk, Northwestern University
Grace Chan, Northwestern University
Sandra Waxman, Northwestern University

Preterm infants are at risk for neurocognitive deficits that may persist throughout development. Because language capacities in preverbal infants are predictive of later capacities, researchers have sought to identify how preterm infants' language capacities unfold. By three months, full-term infants have already begun to link language to core cognitive capacities, including object categorization (Ferry, Hespos & Waxman, 2010). Infants show evidence of categorization through looking patterns; at three months, a preference for familiar objects indicates categorization, whereas at four months, a preference for novel objects indicates categorization. Here we show that the shift from familiarity to novelty preferences is preserved in preterm infants: when age is corrected for gestation, preterm infants at three months show a familiarity preference, and at four to ten months show a novelty preference. These results provide the first hints that the processes underlying the link between language and cognition are influenced strongly by maturational factors.

Notes

Session A--Metcalf Small

Phrasal prosody constrains online syntactic analysis in two-year-old children

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Isabelle Dautriche, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS), Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique - CNRS
Anne Christophe, Laboratoire de Sciences Cognitives et Psycholinguistique (EHESS-DEC(ENS)-CNRS), Ecole Normale Supérieure, Laboratoire de Sciences Cognitives et Psycholinguistique - CNRS

Given the role of prosody in infant speech perception and the correlation between syntactic and prosodic structure, it has been suggested that infants might use prosody to bootstrap syntax. However, while adults and pre-schoolers use phrasal prosody to recover the syntactic structure of sentences, there is still no direct proof that younger children are able to do so. Noun/verb homophones in French were used to create locally ambiguous sentences (e.g. [la petite ferme] [est jolie] the small farm is nice vs. [la petite] [ferme la fenêtre] the little girl closes the window - brackets indicate prosodic boundaries). Crucially, all words following the homophone were masked, such that prosodic cues were the only disambiguating information. In a preferential-looking procedure, upon hearing the first three words, two-year-olds successfully exploited prosody to assign the appropriate syntactic category to the target word, showing that they use phrasal prosody online to constrain their syntactic analysis.

Session B--Terrace Lounge

Is more always better? The perception of Dutch vowels by English versus Spanish learners

Samra Alispahic, University of Western Sydney, The MARCS Institute
Paola Escudero, University of Western Sydney, The MARCS Institute
Karen Mulak, University of Western Sydney, The MARCS Institute

This study compares how Australian English and Peruvian Spanish listeners discriminate five Dutch vowel contrasts. Given their large native vowel inventory, which is comparable to that of Dutch, one would expect English listeners to outperform Spanish listeners, as the latter only have five vowels. Surprisingly, our results show no main effect of language background, indicating no general advantage for English listeners. An interaction between language background and contrast revealed higher accuracy for English than Spanish listeners in only one of the five contrasts. Analyses of the acoustic properties of Dutch, English and Spanish vowels and of listeners' mappings of Dutch vowels to native vowel categories explain the comparable discrimination. For example, both groups did not map the Dutch vowels /i/ and /I/ to separate native categories, and as a result had lower accuracy for Dutch /ɪ-i/. These findings will be discussed in relation to models of non-native and L2 speech perception.

Notes

Session C--Conference Auditorium

Language development of internationally adopted children: length of institutionalization outweighs age-of-acquisition

Natalia Rakhlin, Wayne State University, Yale University
Sascha Hein, Yale University
Elena Grigorenko, Yale University

We investigated language development of internationally adopted children (IAC) and the roles of pre-institutional risks (e.g., prenatal exposure to substances, prematurity), age of initial institutionalization, its length, and age at adoption in children's development over a 1-year period, first measured ~three years post-adoption.

Compared to age-peers reared in biological families, IAC underperformed on general language, early literacy, and non-verbal IQ, but demonstrated complete catch-up on kindergarten knowledge and communication skills at time 2. Age at adoption negatively correlated with language outcomes, but not after controlling for length and age of initial institutionalization (it remained significant when controlling for early risks and time post-adoption). In contrast, correlations between language and length/age of institutionalization remained significant after controlling for age at adoption. This suggests that the effects of duration and timing of institutionalization confound the effect of age of adoption. The early age-of-acquisition effect appears tenuous, as is the effect of pre-institutional risks.

Session A--Metcalf Small

Abstract representation of Object-Verb order by 19 months: An experiment on Hindi-Urdu

Anna Gavarró, Universitat Autònoma de Barcelona
Maya Leela, Universitat Autònoma de Barcelona
Luigi Rizzi, University of Siena, University of Geneva
Julie Franck, University of Geneva

Franck, Millotte, Posada & Rizzi (2011) provided evidence for early abstract knowledge of VO order in French, an instance of the head-complement order. We present an experiment based on the same experimental paradigm combining preferential looking and the weird word order procedure but with children exposed to Hindi-Urdu, a language selected for its complement-head order.

We tested 20 children of 19 months from Hindi-Urdu speaking families. The materials were those of Franck et al., except that the grammatical transitive condition consisted of SOV sentences whereas ungrammatical sentences were VSO.

Looking times to the causative video in the four critical windows show above-chance gazes during the second, and third presentations of the grammatical SOV sentences. In contrast, children behaved at chance in all windows when hearing ungrammatical VSO sentences. The results provide evidence for early abstract knowledge of a fundamental property of Hindi-Urdu word order, with the object preceding the verb.

Session B--Terrace Lounge

Interactions between statistical aggregation and hypothesis testing mechanisms during word learning

Alexa Romberg, Indiana University
Chen Yu, Indiana University

Adults, children and infants are all able to infer likely word meanings based on the relative frequency with which labels and referents appear together (e.g., Smith & Yu, 2007; Yu & Smith, 2008). However, the extent to which learners rely on aggregation of co-occurrence statistics vs. test specific hypotheses to infer mappings is currently a matter of significant uncertainty (Smith & Yu, 2012), exacerbated by the different experimental methods used to test learning mechanisms. Real world word learning is likely to involve a combination of statistical aggregation and active hypothesis testing. The current experiment investigates how these two learning mechanisms interact during word learning by having participants respond to a subset of items during a cross-situational word learning task. We find that hypothesis-testing is most effective when informed by statistical information and that the process of hypothesis-testing draws attention away from the remaining set of items.

Session C--Conference Auditorium

Maximizing Vocabulary Development through Shared Book Reading and Play

Tamara Speiwak-Toub, Temple University
Brenna Hassinger-Das, Temple University
Hande Ilgaz, Bilkent University
Kathy Hirsh-Pasek, Temple University
Roberta Golinkoff, University of Delaware
David Dickinson, Vanderbilt University
Molly Collins, Vanderbilt University
Kimberly Nesbitt, Vanderbilt University
Ageliki Nicolopoulou, Lehigh University

Early language development is strongly related to later language and reading ability, but efforts to foster early language in young children have met with varied success. Book reading has been found to impact vocabulary learning, and playful learning is often more effective than didactic instruction. We present findings from the Read-Play-Learn project conducted with preschoolers from low-income families to identify methods that maximize vocabulary learning. We asked whether children could learn words through a combination of book reading and play and whether the type of play mattered for word-learning. Three types of play were contrasted. Results showed significant gains in children's receptive and expressive knowledge of words taught during the read and play intervention. Children did not gain as much knowledge for exposure or control words. Adult-supported types of play were more effective than free play. This work has theoretical import regarding language development and implications for child-centered curricula development.

Notes

CLOSING SYMPOSIUM

Learning to think ahead – thinking ahead to learn: The role of prediction in language learning and use across the lifespan

Theres Grüter, University of Hawai'i (organizer)
Arielle Borovsky, Florida State University
Edith Kaan, University of Florida
Kara D. Federmeier, University of Illinois at Urbana-Champaign
Edward W. Wlotko, Tufts University

Anticipatory processing – the rapid and incremental use of information from various sources to create expectations about what will come next – is a critical component of real-time language use, at least in healthy young adults using their native language (Altmann & Kamide, 1999; DeLong et al., 2005). The goal of this symposium is to explore the extent to which this observation extends to other populations, including children, adult second language (L2) learners, and aging native speakers. Recent findings from these groups suggest that the contribution of predictive mechanisms to language processing changes across the lifespan. Moreover, the ability to engage in predictive processing appears to be related to various measures of linguistic ability, such as vocabulary size, verbal fluency, and L2 proficiency. This raises the question of the nature of the relationship between anticipatory processing and language learning, which constitutes the central theme of this symposium.

Predictive language comprehension: From infancy to early adulthood
Arielle Borovsky

Successful spoken language interpretation requires the seamless coordination of many skills as the acoustic signal unfolds, including an ability to interpret the speech signal incrementally and predictively. These abilities vary widely in infancy, and importantly, are associated with concurrent language skills and long-term language outcomes. But do incremental processing abilities continue to matter later in life? The answer is a resounding "Yes." I will discuss results from an eye-tracked spoken sentence comprehension task, where we assessed real-time sentence processing skills in a large sample (N=128) ranging from age three to early adulthood. Anticipatory sentence interpretation correlated with individual differences in vocabulary skill in children and adults. Additionally, there were clinically-relevant distinctions in performance: Children with specific language impairment show lexical activation differences across sentences relative to age-matched peers. These findings provide tantalizing evidence that predictive processing skills matter for language ability across development.

Predictive processing in second-language sentence processing: What's different?
Edith Kaan

There is ample evidence that native speakers anticipate upcoming information at various levels during sentence comprehension. In contrast, some studies on late L2 learners support the view that L2 learners do not anticipate information during processing, or at least, not to the same extent as native speakers do. In this talk I will first discuss how a reduced ability to predict upcoming information can account for some of the differences observed between native and non-native sentence processing. Second, I will argue that native and L2 speakers are underlyingly the same as far as sentence processing mechanisms are concerned, and that potential differences in anticipatory behavior can be accounted for by the same factors that drive individual differences in native speakers, in particular, differences in frequency biases, competing information, the accuracy and consistency of the lexical representation, and task-induced effects.

Predictive and reinterpretive modes of sentence comprehension trade off: Evidence from event-related brain potentials in younger and older adults
Kara D. Federmeier & Edward W. Wlotko

Healthy aging brings changes in neurocognitive mechanisms of language comprehension. Event-related brain potential (ERP) studies have shown that older adults as a group often fail to pre-activate likely upcoming words, and instead are more likely to show brain responses associated with reinterpretation of prior context. Younger adults are also less likely to anticipate upcoming words in situations in which specific predictions are rendered unreliable (by frequently replacing predictable words with unexpected synonyms). Furthermore, within both age groups, individuals who are more likely to predict are less likely to show evidence of reinterpreting prior context. Thus, a similar trade off between an anticipatory vs. stimulus-driven mode of comprehension appears (1) across individuals, (2) within individuals as a result of adaptation to a situational environment, and (3) over the lifespan. As such, multiple neurocognitive mechanisms can support language comprehension, and the brain flexibly adjusts to most effectively achieve comprehension goals given a particular set of circumstances and availability of processing resources.

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Alternates

Late bilinguals access lexical-semantic and grammatical information in parallel: A cross-modal ERP repetition priming study

Sina Bosch, Potsdam Research Institute for Multilingualism
Helena Trompelt, Potsdam Research Institute for Multilingualism
Alina Leminen, Potsdam Research Institute for Multilingualism
Harald Clahsen, University of Potsdam, Potsdam Research Institute for Multilingualism

We investigated the representation of morphosyntactic feature information of inflected word forms as well as the temporal dynamics of grammatical access and lexical-semantic retrieval in late bilingual's language processing. Advanced late learners of German with Russian as L1 processed German inflected adjectives in behavioral and ERP priming experiments. While the behavioral experiment indicated native-like performance, the ERP results revealed L1-L2 differences with respect to the temporal sequencing of grammatical and lexical-semantic processing. While lexical-semantic retrieval effects in the L2 were visible in the same time windows as for L1 speakers, L2 morphosyntactic processing was less focused than in the L1 and extended to later processing stages. We suggest that because L2 grammar processing is less automatic and more costly, morphosyntactic feature evaluation requires more time than in the L1.

Alternates

A Hebb learning approach to developmental differences in phonological learning

Smalle Eleonore, Catholic University of Louvain
Louisa Bogaerts, Ghent University, Belgium
Mike P.A Page, University of Hertfordshire, Hatfield, UK
Martin Edwards, Catholic University of Louvain
Wouter Duyck, Ghent University
Arnaud Szmalec, Catholic University of Louvain, Université Catholique de Louvain

It has been found that age-related differences in sequential motor learning performance follow an inverted U-shape pattern, with highest performance around adolescence. This is explained by the emergence of complex memory processes in adulthood that support explicit and pattern-based learning at the cost of reduced sensitivity to simple transitional probabilities. Departing from this memory perspective, we investigated developmental differences in phonological learning. Two groups of children (6 vs. 12 years) were compared with adults on a Hebb learning task in which repeating and random sequences of phonemes were presented for immediate recall. We observed a similar age-dependent pattern, but only when the repeating sequence did not overlap with the random sequences, indicating that the children's superiority in phonological learning disappears when complex pattern learning is elicited. Children also showed better long-term saving and this effect also reversed for more complex learning. These findings are discussed in light of sensitive periods in language acquisition.

Notes

Alternates

The linguistic- and the learner-default converge in some null subject languages

Maialen Iraola Azpiroz, University of Konstanz
Maria-José Ezeizabarrena, University of the Basque Country

The overextension of overt pronouns to null subject contexts results in such a form being the learner-default option, which contrasts paradoxically with the linguistic default, i.e. the null pronoun (Tsimpli 2011), the weaker element (Cardinaletti & Starke 1999). The aim of the study is to check the validity of the paradox in Basque where overt referential devices fall out of the scope of what traditionally counts as third person pronouns. Performance data of L1-Basque and L2-Basque 6–8-year-olds in two off-line tasks indicate a general preference for coreference with the subject, regardless of pronoun type, as predicted by Locality and Prominence Requirements (O'Grady 1997) and b) a preference for null pronouns regardless of [+/-TS] contexts. The specificities of Basque and the acquisition data reported point to a convergence between the notions of linguistic- and learner-default, in both cases the null pronoun, which casts doubt upon the universality of the discrepancy.

Alternates

On-line comprehension of Russian case cues in monolingual and bilingual children with L2/Hebrew and L2/Dutch

Bibi Janssen, University of Amsterdam
Natalia Meir, Bar Ilan University
Anne Baker, University of Amsterdam
Sharon Armon-Lotem, Bar Ilan University

This study investigates (1) whether monolingual and bilingual children are sensitive to case cues and (2) to what extent age of L2 onset affects case cue processing in bilingual children. An online sentence comprehension task was used to test comprehension and processing of case cues (in SVO and OVS sentences) in the Russian of typically developing Russian-Dutch, Russian-Hebrew and two groups of monolingual Russian children (n=72). All four groups performed similarly on SVO sentences, while on OVS the monolingual age-matched group significantly outperformed both bilingual groups.

The results of the monolingual groups support MacWhinney`s observation (2005) that children learning a highly inflected language are sensitive to case cues. However, bilingual children -especially those with earlier L2 onset- fail to process morphological cues on nominal categories and interpret the first noun in a sentence as the subject following the First-Noun-Strategy (VanPatten 2004), which was originally formulated for L2 learners.

Alternates

Age, instruction, and implicit vs. explicit second language learning

Karen Lichtman, Northern Illinois University

The idea that children learn languages implicitly but adults learn languages explicitly is common in second language acquisition, but most studies on the topic either only test adults, or have confounds between age and instruction. The present study taught children age 5-7 and adults an artificial mini-language under controlled implicit or explicit training conditions over the course of seven days. Surprisingly, children—like adults—developed more awareness of the language's structures when given explicit training, and produced sentences more accurately under explicit testing directions. However, adults (who had had more explicit language instruction) were more likely to guess the mini-language's rules. Although age and instruction both influence implicit vs. explicit learning, age plays a smaller role, and instruction a larger role, than previous literature has claimed. Theoretically, these results support views of child and adult second language learning as fundamentally similar.

Alternates

False Belief Reasoning and the Acquisition of Relativization and Scrambling in Russian Children

Mari Ovsepyan, Southern Illinois University - Carbondale
Usha Lakshmanan, Southern Illinois University - Carbondale

The current research contributes to debates concerning the status of linguistic precursors (e.g. embedded complement clauses and double-event relatives) to false-belief reasoning development (see Smith, Apperly & White, 2003), by examining evidence from children acquiring Russian, an SVO language with flexible word-order. Marked word-order (i.e. scrambled) utterances, which entail perspective-shifting, have been attested in Child Russian from age 1;6. We hypothesized that Russian children's acquisition of scrambled (OVS) word-order would be a stronger predictor of their false-belief reasoning skills than relativization and that 3- and 4-year-olds would perform similarly on standard false-belief tasks. The results of our cross-sectional study indicated that four-year-olds outperformed three-year-olds on the false-belief tasks. Both age groups were significantly more accurate in judging double-event relatives than scrambled OVS sentences. The results confirmed the previously established developmental link between Age (in months) and false-belief reasoning but failed to support a privileged status for either relativization or scrambling.

Notes

Alternates

Infants are sensitive to asynchronous audiovisual speech

Kathleen Shaw, University of Connecticut - Storrs, Haskins Laboratories
Heather Bortfeld, University of Connecticut - Storrs, Haskins Laboratories

Speech perception is multimodal, yet recent research has demonstrated that audiovisual integration develops relatively slowly even in pre-adolescents. In the current study, we investigated whether place of articulation differences could boost infant sensitivity to asynchronous audiovisual speech. Infants between 5- and 10-months old were presented with trisyllabic words that differed in articulatory visibility in a preferential looking paradigm. Both groups of infants preferred to look at more visible articulations, regardless of audiovisual synchrony, yet older infants looked longer to asynchronous presentations when the word was highly visible, in comparison to when the word was less visible.

We suggest that infants' emerging sensitivity to audiovisual timing is driven by the causal relationships between articulators and the sounds produced and the amount of information available to predict audiovisual correlations. We purport that sensitivity to temporal relations between the acoustic and visual speech signals can aid in early phonemic perception and subsequent production

Alternates

Acquisition of the "New Impersonal Construction" in Icelandic

Sigríður Sigurjónsdóttir, University of Iceland

A new syntactic construction (NC) has surfaced in Icelandic and is spreading. It takes the form 'it was scolded us' instead of the standard passive 'we were scolded'. Recent nationwide studies show a clear intergenerational variation and indicate that the locus of this change lies in child language acquisition.

Sixty preschool children were given a comprehension task testing actives, topicalized actives, standard passives (with and without a by-phrase), expletive passives, and the NC. The verbs tested subcategorize for either accusative or dative case. The results indicate that at the age of 3;0, Icelandic-speaking children do much better on sentences where the object stays in situ (active and the NC) than on constructions which involve movement (passive and topicalized sentences). Different Aktionsarts of the verbs affect the results: children's comprehension of adjectival passives precedes their understanding of eventive passives, which in turn develop earlier than passives of experiencer verbs.

Notes

Alternates

24-month-olds but not 18-month-olds comprehend 'it' in ambiguous contexts: Evidence from preferential looking

Barbora Skarabela, University of Edinburgh
Alexandra Conner, University of Edinburgh
Katie Ruthven, Cambridge University
Mitsuhiko Ota, University of Edinburgh

There is currently no direct evidence that children younger than 2.5 years understand that pronouns refer to a previously mentioned (or given) referent. To examine this issue, we tested 18- and 24-month-olds' interpretation of the pronoun 'it' in a controlled environment. We used a preferential looking paradigm in which a single target object was first visually presented and named in a full noun phrase (e.g., "Look, a sock"), and then shown again, this time accompanied by a distractor object and a test sentence (e.g., "Can you find it?"). The results showed that 18-month-olds (N=12) could correctly identify the target object when the test sentence used a definite noun (e.g., "the sock"), but not when it used 'it'. In contrast, 24-month-olds (N=12) visually fixated on the given referent in response to the pronoun 'it', demonstrating that such understanding of pronouns is well established by 2 years of age.

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Index

T

U

V

W

Y

Z