The 11th Annual
Boston University

Conference on Language Development

October 17th, 18th, 19th, 1986

Boston University
School of Education

The Eleventh Annual Boston University Conference on Language Development

October 17, 18, and 19, 1986

Organized by the graduate students
in the programs in
Applied Psycholinguistics
and Language Behavior

WELCOME

Welcome to the Eleventh Annual Boston University Conference on Language Development. This year's Conference focuses again on first and second language acquisition, American sign language, language disorders, interaction, and theoretical issues in linguistics. In addition, the program includes sessions on story comprehension and production and on language behavior in specific populations, and special symposia on literacy and on theoretical issues in the acquisition of grammar.

The Conference is supported by the Boston University School of Education, the Program in Applied Psycholinguistics, and the Graduate School Program in Language Behavior. Although the students in these programs are responsible for every aspect of the Conference, we would like to take this opportunity to thank Dean Paul Warren of the School of Education and the faculty in the Programs in Applied Psycholinguistics and Language Behavior for their cooperation in helping us make this year's Conference possible.

Special thanks are directed to the advisor of the Conference, Professor James Paul Gee of the School of Education. Jim has worked with the Conference Committee throughout the year, guiding us, goading us, making suggestions, inspiring us, challenging us, and keeping us on target. He has also been "in the trenches" with us, working on all of the mundane but crucial details which go into the production of a Conference of this size and scope. We therefore dedicate this Handbook to Jim Gee, with fond appreciation.

The 1986 Conference Committee

Cynthia Ballenger
Gale Binus
Marie Chesnick
Margaret Hoyt
Beatrice Mikulecky
Marnie Reed Murphy

ACKNOWLEDGMENT OF REVIEW COMMITTEES

The Conference wishes to thank the following members of the Review Committees for their aid in the selection of this year's papers:

Mary E. Curtis, Harvard University
Susan Fisher, CUNY Graduate Center
Thomas J. Garza, Harvard University
James Paul Gee, Boston University
Jean Berko Gleason, Boston University
Wendy C. Goodheart, Pennsylvania School for the Deaf
Beverly A. Goldfield, Harvard University
Peter Gordon, University of Pittsburgh
Jane B. Grimshaw, Brandeis University
Jess Gropen, Massachusetts Institute of Technology
Ann Hilferty, Harvard University
Judy Kegl, Northeastern University
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Beatrice Mikulecky, Boston University
Steven Pinker, Massachusetts Institute of Technology
Livia Polyani, Bolt, Beranek, and Newman, Inc.
Karen Price, Harvard University
Thomas Roeper, University of Massachusetts, Amherst
Judy Schickedanz, Boston University
Janet Cohen Sherman, Massachusetts Institute of Technology
Kristine Strand, Kennedy Memorial Hospital for Children, Boston
Patton O. Tabor, Harvard University
Helen Tager-Flusberg, University of Massachusetts, Boston
Denny Wolfe, Project Zero, Harvard University

GENERAL INFORMATION

REGISTRATION

Registration will be held Friday, October 17, from 12:00 to 5:00 p.m. in the School of Education lobby, and from 6:00 to 8:30 p.m. in the George Sherman Union lobby; Saturday, October 18, beginning at 8:00 a.m., and Sunday, October 19, beginning at 9:00, in the Metcalf Science Center Lobby.

LOCATION

On Friday afternoon, all sessions will be held on the first floor of the School of Education (605 Commonwealth Avenue). The Keynote Address will be presented in the Large Ballroom on the second floor of the George Sherman Union (775 Commonwealth Avenue), and Sunday sessions will be held at the Metcalf Science Center (590 Commonwealth Avenue).

KEYNOTE ADDRESS

Professor Noam Chomsky, Massachusetts Institute of Technology, will deliver the Keynote Address at 8:30 p.m. on Friday at the George Sherman Union.

RECEPTION

Immediately following the Keynote Address, you are cordially invited to a wine and cheese reception in the adjacent Small Ballroom.

PUBLISHERS' EXHIBITS

Exhibits of books and publications will be located on the ground floor of the Metcalf Science Center all day Saturday and all day Sunday.

POSTER SESSIONS

This year, the Poster Sessions will be located in the Lounge adjacent to the registration area in the Metcalf Science Center. The Poster Sessions will be open all day Saturday and all day Sunday.

SIGN LANGUAGE INTERPRETERS

Sign language interpreters will be available for all sessions. Please inquire at the registration desk when you arrive.

ADDITIONAL CONFERENCE HANDBOOKS

Additional Handbooks may be purchased for $4.00 each (CHECKS ONLY) at the registration desk. We are sorry, but we cannot replace lost Handbooks free of charge. A limited number of 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, and 1985 Handbooks are also available for purchase for $3.00 each.

REFRESHMENTS

In addition to the Wine and Cheese Reception on Friday evening, complimentary refreshments will be available at the Metcalf Science Center. On Saturday, coffee and tea will be available in the first floor stairway area from 8:00 a.m. to 3:00 p.m. On Sunday, bagels and cream cheese, as well as coffee and tea, will be available in the same place from 9:00 a.m. to 3:00 p.m.

MESSAGE BOARD

You may send and receive messages on the message board located in the registration area of the Metcalf Science Center.

BADGES

For your convenience in entering the buildings and sessions, please be sure to wear your name badge at all times. This is necessary in order to comply with Boston University security regulations.

PARKING

Parking spaces are available in Boston University lots for $4.50 per day. Be sure to mention that you are attending the Language Conference.

CONFERENCE SCHEDULE

FRIDAY	SED 130 (Auditorium)	SED 140	GSU
2:00 p.m.	Modularity	American Sign Language	--
8:00 p.m.	--	--	Keynote Address

SATURDAY	MSC 107 (Auditorium)	MSC 113	MSC 115
9:00 a.m.	Theoretical Approaches to Language Acquisition	Story Comprehension and Production	First Language Acquisition I
2:00 p.m.	Negative Evidence	Language Behavior in Specific Populations	First Language Acquisition II

SUNDAY	MSC 107 (Auditorium)	MSC 113	MSC 115
10:00 a.m.	Symposium: Theoretical Issues in the Acquisition of Grammar	Interaction	Symposium on Literacy
1:30 p.m.	Symposium Continues	Second Language Acquisition	Symposium Continues

Poster Sessions: Saturday (9-5) and Sunday (10-5) in the First Floor Lounge, MSC.

Publishers' Exhibits: Saturday (9-5) and Sunday (10-5) in the Ground Floor Dining Area, MSC.

Key: SED - School of Education, 605 Commonwealth Ave.
GSU - George Sherman Union, 775 Commonwealth Ave.
MSC - Metcalf Science Center, 590 Commonwealth Ave.

CONFERENCE PROGRAM

FRIDAY AFTERNOON

Modularity

Chair: Thomas Roeper, University of Massachusetts, Amherst
School of Education, Auditorium (Room 130)

2:00 Yukio Otsu - Tokyo Gakugei University

2:30 Jan and Charlotte Koster - University of Groningen, Netherlands
The acquisition of bound and free anaphora

3:00 David Lebeaux - University of Arizona
Reassignment of functions in acquisition

3:30 David Pesetsky - University of Massachusetts, Amherst
Lexical properties

4:00 Dan Finer - State University of New York, Stony Brook
Lexical parameterization and second language acquisition

4:30 Tom Roeper - University of Massachusetts, Amherst
Cross-modular triggers

5:00 Stephen Crain - University of Connecticut and Haskins Laboratories
On the developmental autonomy of syntax

American Sign Language

Chair: Robert Hoffmeister, Boston University
School of Education, Room 140

2:00 Integrating ASL and English: Experienced signers' modifications of manually encoded English. Martha Gonter Gaustad - Bowling Green University. Thomas N. Kluwin - Gallaudet College.

2:30 Inferential comprehension in skilled and less-skilled, hearing-impaired and normal-hearing readers. Elizabeth M. Wilkes - Chinchuba Institute for the Deaf

3:00 Examining language dominance through hand dominance. Ursula Bellugi, Edward S. Klima, Diane Lillo-Martin, Lucinda O'Grady, Jyotsna Vaid - The Salk Institute for Biological Studies.

3:30 The acquisition of plural inflections by Italian hearing and deaf children. Virginia Volterra - Consiglio Nazionale delle Recerche, Rome. Traute Taeschner and Antonella Devescovi - Universita' di Roma

4:00 Groping for orientation: The representation of space and form in child ASL. Brenda S. Schick - Purdue University.

FRIDAY EVENING

George Sherman Union, Large Ballroom

8:00 Welcome & Introduction of Keynote Speaker

8:30 KEYNOTE ADDRESS
Noam Chomsky, Massachusetts Institute of Technology
Changing perspectives on the nature of acquisition of language

Wine & Cheese Reception
Small Ballroom

SATURDAY MORNING

Theoretical Approaches to Language Acquisition

Chair: Carol Neidle, Boston University
Science Center, Auditorium, Room 107

9:00 Janet Dean Fodor - City University of New York
Learning the periphery

9:30 Jess Gropen and Steven Pinker - Massachusetts Institute of Technology
Constrained productivity in the acquisition of the dative alternation.

10:00 Nina Hyams - University of California, Los Angeles
Core and peripheral grammar and the acquisition of inflection.

10:30 Celia Jakubowicz - Laboratoire de Psychologie Experimentale, CNRS, Paris. Janet Cohen Sherman Massachusetts Institute of Technology
Lexical knowledge and syntactic principles in children's sentence interpretation.

11:00 Eve V. Clark - Stanford University
What does acquired mean? Discrepancies in linguistic knowledge: Acquisition and beyond.

First Language Acquisition I

Chair: Cynthia Ballenger, Boston University
Science Center, Room 115

9:00 Deixis and anaphora in the acquisition of Italian: The interplay between discourse and morphology. Elena Pizzuto - Istituto per le Applicazioni Interdisciplinari della Fisica, Consiglio Nazionale delle Recerche. Cristina Caselli - Istituto di Psicologia, Consiglio Nazionale delle Recerche, Roma

9:30 The acquisition of complex sentence structures in Sesotho. Katherine Demuth - Boston University

10:00 Contextual information and temporal terms. Paul Gorrell, Stephen Crain and Janet D. Fodor - University of Connecticut

10:30 Questions about Wh-questions. Karin Stromswold - Massachusetts Institute of Technology and Harvard Medical School. Steven Pinker - Massachusetts Institute of Technology

11:00 Lexical learning and generalizations in the passive acquisition. Peter Gordon and Jill Chafetz - University of Pittsburgh

11:30 Acquiring the components of verb meaning from syntactic evidence. Letitia G. Naigles - University of Pennsylvania

Story Comprehension and Production

Chair: Peggy Hoyt, Boston University
Science Center, Room 113

9:00 Wendy Lehnert - University of Massachusetts, Amherst
Plot units and narrative summarization

9:30 Brian Reiser - Princeton University
Knowledge structures in comprehension and memory

10:00 Nancy L. Stein - University of Chicago
A model of children's storytelling skill

10:30 Thomas Trabasso - University of Chicago
Achieving global coherence of story understanding through local cohesion

SATURDAY AFTERNOON

The Question of Negative Evidence

Moderator: Steven Pinker, Massachusetts Institute of Technology
Science Center, Auditorium, Room 107

2:00 Jane Grimshaw, Brandeis University
Linguistic mistakes: The role of negative evidence in language learning

2:30 Virginia Valian, University of Rochester
The input to language acquisition

3:00 Michael Maratsos, University of Minnesota
On the roles of input and tabulation

3:30 Kathy Hirsh-Pasek, Haverford College & Roberta Michnick Golinkoff, Susan M. Braidi, Louise McNally, University of Delaware
"Daddy throw": On the existence of implicit negative evidence for subcategorization errors

4:00 Kenneth Wexler, University of California, Irvine
Negative evidence and learnability

Language Behavior in Specific Populations

Chair: Kristine Strand, Kennedy Memorial Hospital for Children, Boston
Science Center, Room 113

2:00 Teaching subjecthood to language disordered children. Phil J. Connell, Northwestern University

2:30 Specific language impairment in two languages: Converging evidence. Laurence B. Leonard, Purdue University, Letizia Sabbadini, USL RM1, Rome, Virginia Volterra, Instituto di Psicologia, CNR, Rome, Jeanette S. Leonard, Purdue University

3:00 When stand is sand, but sick is stick: An acoustic analysis of an unusual articulation pattern. Janice Corrazza and Nan Bernstein Ratner, University of Maryland, College Park

3:30 Phonological schemas for the past tense: Oral deaf versus hearing children. Therese Baumberger, Jill and Peter de Villiers, Smith College

4:00 Questions and answers: Social class differences in a teacher-pupil interaction task. Lynne Feagans, Elaine Fields and Dale Farran, The Pennsylvania State University

First Language Acquisition II

Chair: David K. Dickinson, Tufts University

2:00 The use of non-ostensive words in varied linguistic contexts: A study of word awareness in 6-12 year-olds. Denise E. Segal - Tufts University

2:30 Learning names for materials: Linguistic and conceptual constraints. David K. Dickinson - Tufts University

3:00 A case study of fast mapping of novel action verbs: The roles of event and discourse context. Nancy W. Streim and Robin S. Chapman - University of Wisconsin

3:30 Discourse and the acquisition of grammatical morphemes. M. Jeffrey Farrar - University of Denver

4:00 Testing the language bioprogram hypothesis: A review of children's acquisition of verbs. Gary A. Cziko - University of Illinois, Urbana-Champaign

SUNDAY MORNING

Interaction

Chair: Marie Chesnick, Boston University
Science Center, Room 113

10:00 The role of maternal input in the acquisition process: Communicative strategies of adolescent and older mothers with their language learning children. Lori J. Van Houten - Brown University

10:30 The effect of variation in conversational style on children's linguistic and conversational performance. Barbara L. George - Emory University

11:00 Dyads, triads, and more: Preliminary analyses of complex family interaction. Ann R. Eisenberg - The University of Texas, San Antonio

11:30 Early language skills and symbolic play development: A cross-sequential look. Julie Simon - State University of New York, Albany

Theoretical Issues in the Acquisition of Grammar: Evidence from Children with Sensory, Cognitive, or Neurological Deficits

Organizer & Chair: Helen Tager-Flusberg, University of Massachusetts, Boston
Science Center Auditorium, Room 107

10:00 Jill and Peter de Villiers, Smith College
Parallels and divergences in the acquisition of oral English by deaf and hearing children: Evidence for structural constraints

10:30 Susan Goldin-Meadow and Carolyn Mylander, University of Chicago
Development of morphology without a conventional language model

11:00 Helen Tager-Flusberg, University of Massachusetts, Boston
Constraints on the process of grammatical development: Evidence from autistic and Down syndrome children

11:30 Barbara Landau, Columbia University
From syntax to meaning in first language learning

Symposium on Literacy

Moderator: John Trimbur, Boston University
Science Center, Room 115

10:00 David K. Dickinson, Tufts University and Catherine E. Snow, Harvard University
Language-literacy relationships in kindergarten

10:30 Caroline Zinsser, Center for Public Advocacy Research, Inc.
Learning to be literate in a fundamentalist Sunday school

11:00 Adrian T. Bennett, The Lexington Center
Meaning and truth in the struggle for literacy

11:30 Brian V. Street, The University of Sussex
Literacy practices and literacy myths

SUNDAY AFTERNOON

Theoretical Issues in the Acquisition of Grammar: Evidence from Children with Sensory, Cognitive, or Neurological Deficits (Continuation of morning session)

Organizer & Chair: Helen Tager-Flusberg, University of Massachusetts, Boston
Science Center Auditorium, Room 107

1:30 Anne Fowler, Haskins Lab, New Haven
Maturational determinants and constraints in rate of language growth in children with Down syndrome

2:00 Elissa Newport, University of Illinois, Urbana-Champaign
The effect of maturational state on the acquisition of language

2:30 Ann Peters, University of Hawaii
The interdependence of social, cognitive, and linguistic development: Evidence from a visually impaired child

3:00 Richard Cromer, MRC Cognitive Development Unit, London
Case studies of dissociations between language and cognition

3:30 Ursula Bellugi, Salk Institute
Dissociations between language and spatial functions

Discussants:
Elizabeth Bates - University of California, San Diego
Lila Gleitman - University of Pennsylvania

Symposium on Literacy (Continuation of morning session)

Moderator: John Trimbur, Boston University
Science Center, Room 115

1:30 David R. Olson, Ontario Institute for Studies in Education and Janet W. Astington, University of Toronto
Talking about texts: How literacy contributes to thought

2:00 Mary E. Curtis, Harvard University
Vocabulary, literacy and schooling

2:30 Niko Besnier, University of Illinois, Urbana-Champaign
Spoken and written language differences in a restricted literacy setting

3:00 Roundtable discussion to include all literacy participants

Second Language Acquisition

Chair: Bruce Fraser, Boston University
Science Center, Room 113

1:30 The principle of adjacency in second language acquisition. Lydia White, McGill University

2:00 The evolution of code-switching behavior in a Spanish-English bilingual. Nancy R. Mahecha, The Graduate Center of CUNY

2:30 Modular patterns in second language acquisition. Leslie Rescorla, Bryn Mawr and Sachiko Okuda, Daito Bunka University

3:00 The developmental growth of metaphor comprehension in children's first and second language. Janice Johnson, York University

3:30 The word retrieval process and reading acquisition and development in bilingual and monolingual children. Loriana M. Novoa, Harvard University

SATURDAY AND SUNDAY - ALL DAY

Poster Sessions

Science Center, First Floor Lounge
Times for presentation are at the discretion of the presenter/s

Marjorie Beeghly, Harvard University, and Dante Cicchetti, University of Rochester.
Early language development of children with Down syndrome

Marie B. Caulfield, Francine L. Falco, Grover J. Whitehurst, and Janet E. Fischel, State University of New York, Stony Brook
A microanalysis of parent-child language interactions

Barbara D. DeBaryshe, Grover J. Whitehurst, and Janet E. Fischel, State University of New York, Stony Brook
Referential and expressive speech styles in children with delayed productive language

M. J. Demetras, The University of Arizona
Availability of corrective feedback in the conversational responses of working parents to their two-year-old children

Elisabetta DeZuani, M. Chiara Levorato, Istituto di Psicologia, Verona
Children's comprehension of narrative and descriptive passages: The role of structural and semantic organization

Ann R. Eisenberg, The University of Texas, San Antonio
Acquisition of language by a poor articulator

Naomi S. Goodz, Marie-Claire Legare, Lynda Bilodeau and Nira Arbel, Dawson College
Linguistic awareness in bilingual and monolingual preschoolers

Amye Warren Leubecker and Carol S. Tate, University of Tennessee, Chattanooga
Is preschoolers' speech "egocentric"?: Evidence of pragmatic errors and routines in telephone conversations

M. Chiara Levorato, University of Verona, and Cristina Cacciari, University of Bologna
How children comprehend idioms in discourse

Diana Masny, College de Rosemont
Reading, writing and linguistic awareness in L2

Keith E. Nelson and Nancy D. Baker, The Pennsylvania State University
Theoretical and applied implications of experimentally-induced advances in children's language

Elizabeth F. Pemberton and Ruth V. Watkins, The University of Kansas
Language facilitation: Reading and recasting revisited

Leslie Rescorla, Bryn Mawr College
Pretend play in 2-year-olds with expressive language delay

J. A. Rondal, J. P. Thibaut, S. Bredart and A. M. Kaens, University of Liege, Belgium
Pragmatical, semantical and morpho-syntactical factors in the development of passives

Publishers' Exhibits
Science Center, Lower Level Dining Area

Ablex Publishing Corporation

Basic Books, Incorporated

Cambridge University Press

Elsevier Science Publishing Company, Incorporated

Evaluation, Dissemination & Assessment Ctr, California State U.

Harvard Educational Review

Harvard University Press

Lawrence Erlbaum

Little, Brown & Company/College-Hill Press

Merrill Publishing Company

Methuen, Incorporated

The MIT Press

Mouton de Gruyter

Primary Learning Products

Newbury House Publishers

University of Chicago Press

MODULARITY

Chair: Tom Roeper, University of Massachusetts, Amherst

Yukio Otsu, Tokyo Gakugei University

(Title and abstract not available)

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Jan and Charlotte Koster, University of Groningen, Netherlands

The Acquisition of Bound and Free Anaphora

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David Lebeaux, University of Arizona

Reassignment of Functions in Acquisition

I will investigate the consequences of a particular view of the structure of the grammar -- namely, that the "external" levels of Chomsky (1985), DS, PF, and LF, in some sense determine the internal level: s-structure. Of particular interest are the class of constructions in which a dislocated element is bound (or is obligatorily disjoint) to another element in the PS tree: i) Tavakolian's (1977) finding that children, but not adults, allow extra-sentential reference in sentences like "PRO to kiss the duck would make the lion happy", ii)Carden's (1985) discussion of the lack of Condition C effects for children in structures such as "On John$_i$, he$_i$ put a snake", and iii) Roeper's et. al. (1985) surprising finding about lack of strong cross-over effects in early stages in acquisition. It is argued that a direct theory of binding holds (rather than "Chain-Binding" or one in terms of a derived notion of c-command), and that the difference between the child's grammar and the adult's resides in the part that D-structure plays in the two cases: in the adult grammar, DS is a genuine syntactic level, while for the child, s-structure, computed from the surface and a representation of argument structure, is the first real syntactic level.

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David Pesetsky, University of Massachusetts, Amherst

Lexical Properties

(Abstract not available)

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Dan Finer, State University of New York, Stony Brook

Lexical Parameterization and Second Language Acquisition

This paper takes as its starting point the assumption that language acquisition, both first and second, is a process of parameter setting, and it argues that the lexical parameterization hypothesis (cf. Borer 1984, Wexler and Manzini, in press), wherein parametric values are associated with individual lexical items rather than the grammatical system as a whole, is the most appropriate characterization of facts involving parameters of Binding Theory from second language acquisition (Finer and Broselow 1986) and code-mixing (Lee 1986). The relevant data include cases where pronouns and anaphors are treated differently, and cases of code-mixing where binding applies between different syntactic domains defined by the languages which are mixed. The languages involved are English and Korean, which contrast in the locality conditions that constrain the syntactic domain in which a reflexive may search for an antecedent. When the languages are considered separately, the Korean reflexive caki preferentially takes a non-local antecedent, while English himself can take only a local antecedent. In the second language acquisition study, it was found that the range for reflexive interpretation was larger than that offered by the grammar of English, but smaller than that available in the grammar of Korean. The question here is whether this difference with respect to both English and Korean is to be traced back to a different definition of governing category that applies (i) system-wide, (ii) only to anaphors, (iii) only to reflexive anaphors, or (iv) only to himself. The code-mixing study, involving code-mixed sentences containing an English reflexive and such a sentence containing a Korean reflexive, provides a relevant probe into this question since a parameter defined across the code-mixed grammar should yield identical results for both the English and Korean reflexives. Lee's data, however, show a clear contrast between interpretations of sentences containing the English reflexive and sentences containing the Korean reflexive (there is a pragmatic tendency to take a non-local antecedent for caki (strongly reflected in Lee's data), although a local antecedent is in principle possible). The data in (1) is illustrative:

(1) (a) Bill-i mahakilul Tom likes himself
'Bill$_j$ says that Tom$_i$ likes himself$_{u/*j}$'

(b) Bill says that Tom-i caki-lul chohahanta
'Bill$_j$ says that Tom$_i$ likes himself$_{*i/j}$'

Since the two anaphors were treated differentially, contrary to what would be expected were the parametric differences associated with the grammar as a whole, these data appear to

show that parameterization, at least with respect to elements subject to Binding Theory, affects lexical elements --- himself has one governing category, and caki has another. While the question of what can be parameterized and what shape the proper theory of parameters and their values should take is far from clear and far from settled, it does look as though there must be room in the theory for the association of parametric values with individual lexical items.

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Tom Roeper, University of Massachusetts, Amherst

Cross-Modular Triggers

Scientific theories often operate dialectically. Opposite principles are coordinated by a detailed analysis. Linguistics produced a series of modular parameters which make direct links to particular inputs. A large number of parameters seems to be needed to account for all of language variation. This in turn increases the amount of necessary input.

It is possible however that single triggers may affect completely disjunct modules, i.e. they function cross-modularly. This would increase acquisition efficiency. Carlson and Roeper (1980) point out that analysis of productive morphology may simultaneously fix a principle of subcategorization and morphological order. We say rethink the question, but not *think the question. There is a morphological boundary between re and think. This same morphological analysis allows a child to permit unreadmissible but not *inreadmissible, although inadmissible exists. Two concepts are fixed by a productive morphological boundary - 1) the subcategorized object is simple, and 2) no non-neutral affix may precede. The acquisition principle then is: maximize the effects of a trigger. Acquisition evidence supports this analysis.

There is also a connection between the PRO-DROP parameter and Binding Theory. Children persistently fail until the age of 6 or 7 to understand disjoint reference. They do not know that

(x) John likes him.

means that him must not refer to John. We will argue that him functions contrastively with invisible small-pro which is disjoint with the subject. Small-pro is eliminated in object position by lexical rule of intransitivization. Children hear First I looked for a mistake and then John looked but never *and then John looked for.

This kind of example sets a sequence of cross-modular consequences in motion: the lexicon, binding module, and focus module are all involved eliminating co-reference in (x). In some the potential entropy of a modular theory can be offset by the efficiency of a cross-modular trigger.

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Stephen Crain, University of Connecticut and Haskins Laboratories

On the Developmental Autonomy of Syntax

The focus of this talk is a hypothesis about the functional architecture of the human brain, the Modularity Hypothesis. According to this hypothesis, the language faculty is an autonomous system, separate from other higher-level cognitive processes like reasoning, inference, and knot tying. A central tenet is that language processing is managed according to principles that are specific to it and not shared by other cognitive systems. Relevant to the claim of autonomy is evidence that complex linguistic principles emerge relatively early, as compared to other cognitive principles.

Another tenet concerns the locus of interaction of cognitive systems. The Modularity Hypothesis holds that language processing is sealed off from other systems so that a person's beliefs, desires, etc. cannot exert influence on language processing per se, but apply only to the output of the autonomous grammatical processor. In Fodor's terms, language processing is informationally encapsulated, i.e., unaffected by feedback from other cognitive systems. In this connection it has been argued by Forster (1979) that evidence for the autonomy of syntax in language processing is the fact that peculiar, revolutionary, and false sentences are readily understood.

In this paper I present data from language acquisition research that support the Modularity Hypothesis. I discuss experimental studies showing the primacy of syntax over pragmatics for children as young as 2-3 years old. The findings reveal in addition that a rich and intricate system of structural principles is already in place in children this age. To give a brief example, in one study (Crain & McKee, 1986) sentences were presented like `He danced while the lion looked in the mirror'. The task was to determine whether the referent of `he' could be the lion. Children systematically refused to allow co-reference between `he' and `the lion', even in the face of situations in which that interpretation was pragmatically appropriate, i.e., where the lion danced while looking in the mirror, but the zebra refused to dance. In the same circumstances, children accepted sentences like `While he danced the lion looked in the mirror'. These findings demonstrate children's early mastery of the complex structural proscription on co-reference, which is naturally stated in terms of c-command; the findings cannot be explained by invoking any combination of semantics, pragmatics and/or word order.

The fact that 2-3 year-olds override whatever pragmatic biases might tempt them to allow illicit co-reference constitutes a compelling case for the autonomy of syntax in children's acquisition of language. This, in turn, lends support to the view that the language faculty is a biologically coherent module of the human cognitive apparatus.

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AMERICAN SIGN LANGUAGE

Chair: Robert Hoffmeister, Boston University

Martha Gonter Gaustad, Bowling Green University and Thomas N. Kluwin, Gallaudet College

Integrating ASL and English: Experienced Signers Modifications of Manually Encoded English

Experienced users of manually coded English must have made some kind of changes to the systems through the process of normal, daily use. Proficient signers will use one or all of four universal linguistic strategies for improving the efficiency of these systems. Specifically, signs used as morphological markers and/or their bases will be relocated in space, re-oriented, have their paths redirected, will lose non-discriminatory motions, will be contracted into single signs, or will be smoothed together by an "arcing" motion.

Thirty-three severe to profoundly hearing impaired adolescents were tested. Subjects were presented with a target sentence either from a videotape signed by a deaf adult or from a printed page projected on a screen. Since interest focussed on the processing and execution of MCE grammatical elements and content signs, the sentences were constructed to be meaningful as well as to emphasize specific grammatical features.

The results of this study show that modifications made to manual codes on English are not random events, but in the hands of experienced users follow rules either generated from ASL or describable by analogy to form changes in ASL.

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Elizabeth M. Wilkes, Brown University

Inferential Comprehension in Skilled and Less-Skilled, Hearing-Impaired and Normal-Hearing Readers

This study compared the text-connecting inferencing and text integration skills of hearing-impaired (HI) students who had surpassed the documented fourth-grade plateau in reading comprehension with those who had not. These groups were also compared to skilled and less-skilled, normal-hearing (NH) fourth graders. Subjects read a four-page narrative and then answered inference and premise questions. The results indicated that HI readers had greater difficulty making inferences than NH readers, but inferencing ability did not explain the differences between skilled and less-skilled readers in either the HI or NH group. NH readers and skilled HI readers integrated premises separated in the text as well as premises located adjacently.

However, less-skilled HI readers were severely affected by premise distance, even when both premises were recalled. Thus, poor text integration may explain why some HI readers plateau in their reading achievement. The results are discussed in relation to comprehension monitoring and current instructional practices.

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Ursula Bellugi, Edward S. Klima, Diane Lillo-Martin, Lucinda O'Grady, and Jyotsna Vaid, The Salk Institute for Biological Studies

Examining Language Dominance Through Hand Dominance

It has been proposed that left hemisphere specialization for language is related to right hand dominance for manual tasks. Thus stronger and earlier right hand dominance for linguistic tasks could be taken to indicate early left hemisphere lateralization for language. Since American Sign Language (ASL) uses the hands linguistically, and children begin to sign by their first birthday, testing hand dominance in deaf children of deaf parents learning ASL as their native language represents a unique opportunity to determine degree of hand dominance for language and the implied underlying lateralization at a very early age. A set of cross-sectional linguistic and non-linguistic studies was given to 26 right handed deaf subjects of deaf parents from age 3 to 10. These tests show that hand dominance for linguistic activities manifests reliably and robustly at an early age; while hand preference for non-linguistic tasks is less strong than hand dominance for linguistic tasks in deaf signing children. Thus, these studies support the idea that hemispheric specialization for language is present very early. Studies of ASL therefore provide a new perspective on the relationship between hand preference and cerebral specialization through a language in which the hands themselves are the articulators.

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Virginia Volterra, Consiglio Nazionale delle Ricerche, Roma, Traute Taeschner and Antonella Devescovi, Universita' di Roma

The Acquisition of Plural Inflections by Italian Hearing and Deaf Children

Results from other languages suggest that plurals are acquired very early because of their semantic accessibility. This acquisition is markedly delayed if children are faced with a plurifunctional set of plural suffixes. The Italian system of noun inflections provides an interesting test case for such a hypothesis.

75 Italian children from 7 to 11 years of age, divided into three grade levels, were presented with 24 bisyllabic nonsense words constructed according to Italian morpho-phonemic rules. On each item the child was given a singular form and asked to provide the corresponding plural. There were six items in each of the four noun classes: masc. sing. with -o ending, fem. sing. with -a ending, masc. sing. with -e ending and fem. sing. with -e ending. The gender was always indicated by the preceding article.

The same methodology was furthermore used in order to test the acquisition of the Italian system of plural inflections by deaf children.

Similarities and differences between the two groups are presented and discussed.

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Brenda S. Schick, Purdue University

Groping for Orientation: The Representation of Space and Form in Child ASL

In American Sign Language (ASL), notions of motion and location are often expressed in predicate constructions using classifier morphemes. Previous research has found a comparatively prolonged period of development of these morphemes even in relatively simple constructions. The current research project examined the ability of native signing children to integrate classifier morphemes for both a figure and a ground into more complex predicates representing locative relationships (ON, BACK, BETWEEN). While children could produce predicates using the correct classifier handshape, their errors and groping patterns reflected difficulty representing and maintaining spatial relationships that integrated form and space. Their attempts to lighten the 'morphological load' resulted in simplifications of the predicate such as deletions of information, violations of previously signed spatial relationships, and the production of sequential predicates rather than a single complex form. The implications these results have for issues of morphological productivity and what constitutes linguistic knowledge will be discussed.

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THEORETICAL APPROACHES TO LANGUAGE ACQUISITION

Chair: Carol Neidle, Boston University

Janet Dean Fodor, City University of New York

Learning the Periphery

In this paper I try to establish some guidelines for the treatment of peripheral grammatical phenomena by linguistic theory and the theory of language acquisition.

There are two main options for distinguishing core and periphery. They may be discontinuous, in the sense that the periphery violates principles which hold in the core, it may be acquired differently (e.g., by hypothesis testing rather than parameter setting), and may even be of a quite different formal nature (e.g., consisting of rules rather than principles). I will present several arguments, both empirical and methodological, against a discontinuous theory. More plausible as well as more desirable is that the periphery is continuous with the core, in the sense that it results merely from more extreme settings for the parameters that modulate the core principles.

From the work of Berwick, and Wexler & Manzini, we know that, in the absence of systematic negative data for acquisition, parameter values must obey the Subset Principle, i.e., if language A is a subset of language B, then A must be less marked than B. I will give a very general argument which indicates that we should adopt what Lust calls an intensional, rather than an extensional, interpretation of the Subset Principle; that is, a learner's choices are made on the basis of a comparison of alternative grammars compatible with the data, not alternative languages. It follows that there must be an innate evaluation metric, which must rank grammars in an order reflecting inclusion relations among the languages they generate.

Again, there are two alternatives. The metric might consist simply of a list of values for each parameter. This is the typical approach in recent research. But it becomes implausible when combined with a continuous theory of core and periphery, where parameter settings must accommodate a very wide range of variation. Ideally, then, we should be able to identify a completely general evaluation metric which will choose between any two parameter values. The likeliest candidate is a traditional symbol-counting metric. But for this to work, it must be the case that parameter settings corresponding to larger languages are more complex to state than those corresponding to

smaller languages. Examination of some recent proposals shows that they do not typically meet this condition. Sometimes a simple change in the formalism will put things right. But I will illustrate some potential problems that are harder to cure.

A continuous intensional theory of core and periphery will not be easy to achieve; it puts heavy demands on the formal description of linguistic facts. But for the same reason, it can contribute valuable constraints on the proper description of the core. We do not now have such a theory, but we can keep its desirability in mind and, where it seems to fail, try to determine whether this is inherent in the nature of human language or is an artifact of the descriptive systems we currently employ.

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Jess Gropen and Steven Pinker, Massachusetts Institute of Technology

Constrained Productivity in the Acquisition of the Dative Alternation

"Conservativism" in language acquisition was assessed using the dative alternation (give Mary a gift/give a gift to Mary). Children produced the double-object form of novel verbs which they had previously heard only in the prepositional form, contrary to the conservatism hypothesis. In addition, they produced significantly more double-object forms for monosyllabic novel verbs than for polysyllabic ones. Adults, who rated the acceptability of the double-object form of novel verbs which they had previously heard only in the prepositional form, found verbs involving transfers of possession significantly more acceptable than those involving changes of location or benefactive relations. Furthermore, of those verbs involving transfers of possession, monosyllabic ones were rated as better than polysyllabic ones. Results support the hypotheses that children are productive dativizers who come to constrain their rule to apply to phonologically and semantically delimited classes of verbs.

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Nina Hyams, University of California at Los Angeles

Core and Peripheral Grammar and the Acquisition of Inflection

The aim of this paper is to provide a model of the acquisition of inflectional morphology which will explain why a relatively weak system of verbal inflection like that of English is often acquired later and with greater difficulty than the inflectional systems of languages like Polish and Italian which are

considerably richer. We will also explain certain typical acquisition errors which occur in this domain, for example, Slobin's (1973) observation that (Russian and Serbo-Croatian) children tend to "avoid zero affixation." The analysis to be proposed relies heavily on the parameterized system of Universal Grammar and the distinction between core and peripheral grammar proposed within Government-Binding Theory (Chomsky, 1981). It is argued that languages vary with respect to whether their inflectional systems constitute a core or peripheral (marked) property of the language and that the ease of acquisition correlates directly with this distinction. Markedness claims are independently supported by cross-linguistic data from agrammatic aphasics.

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Celia Jakubowicz, Laboratoire de Psychologie Experimentale, CNRS, Paris, and Janet Cohen Sherman, Massachusetts Institute of Technology

Lexical Knowledge and Syntactic Principles in Children's Sentence Interpretation

Current linguistic theories differ as to exactly which aspects of lexical structure, versus other general principles constrain syntactic representations (Bresnan, 1982; Chomsky, 1985; Gazdar, et. al. 1985). This issue raises interesting questions for a theory of first language acquisition. Specifically, to what extent do children depend on lexical knowledge and to what extent do they depend on general syntactic principles in complex sentence interpretation?

To address this question, we presented 36 native French and 36 native English speaking children (age 3-5) with complex sentences to interpret. In each of the sentences, the matrix verb was replaced by a nonsense word. Thus, the question posed by this study is, in the absence of lexical information, how do children assign an interpretation to complex sentences? If semantic information provided by a matrix verb is necessary, then we expect children to provide random interpretations for the sentences presented. If instead children have an independent structural principle then we would expect such a principle to apply even in the absence of lexical information.

Results of this study show that children, from the earliest age studied, apply a general syntactic principle in their interpretation of complex sentences. Specifically, children apply a principle of locality (in the sense of Chomsky, 1981 and further work) in which they choose the nearest c-commanding element as antecedent. This principle was shown to be specifically syntactic since children did not base their interpretation on surface linear order, as has been previously proposed (e.g., Hsu, et. al., 1983; Chipman and Gerard, in press) but rather based their interpretation on hierarchical

relations (e.g., Goodluck and Tavakolian, 1982; Jakubowicz, 1984; Lust and Mangione, 1983). Results also showed that the semantic information provided by a matrix verb is not necessary for the locality principle to apply, and that properties of s-selection (Chomsky, 1985) can be partially inferred from the structure, in spite of the absence of the semantic information of the matrix verb.

The results of this study are in accord with previous research on children's interpretation of control structures and lexical anaphors and pronouns (Deutch and Koster, 1984; Jakubowicz, 1984; Sherman, 1983; Sherman and Lust, 1986). These previous studies, as well as the present study support a model of first language acquisition in which lexical knowledge and syntactic principles are independent, at least in part, before being fully integrated.

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Eve V. Clark, Stanford University

What does "acquired" mean? Discrepancies in linguistic knowledge: acquisition and beyond

(Abstract not available)

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FIRST LANGUAGE ACQUISITION I

Chair: Cynthia Ballenger, Boston University

Elena Pizzuto, Istituto per le Applicazioni Interdisciplinari della Fisica, and Cristina Caselli, Istituto di Psicologia

Deixis and Anaphora in the Acquisition of Italian: The Interplay Between Discourse and Morphology

The study provides longitudinal evidence on the appearance and development of deictic and anaphoric reference expressions in the spontaneous production of three children acquiring Italian as their first language (Age: 1;4-3;0). The study focuses on the acquisition of: - person and possessive pronouns; -definite articles; - verb inflections for person. Results are compared with analogous findings on children acquiring different languages. One major issue is addressed: whether the acquisition of seemingly universal deictic and anaphoric reference structures is controlled by likewise universal, language-independent discourse and cognitive factors or whether, on the contrary, it is significantly influenced by language-specific features. Results indicate that while language-independent factors control some developmental aspects (in particular the acquisition of deictic pronouns), language-specific features may also be relevant. In particular the rich inflectional morphology of Italian appears to lead to a surprisingly early development of verb agreement, definite and anaphoric reference.

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Katherine Demuth, Boston University

The Acquisition of Complex Sentence Structures in Sesotho

Complex sentence structures have been given considerable attention in the theoretical linguistic literature over the years. Each theoretical perspective has proposed that relative clauses, and other complex sentence structures including clefts, pseudo clefts, wh-questions, be represented in the grammar in a certain way.

Regardless of the particular grammatical representations posited for these constructions, it has generally been thought that they posed a complex task for the young language learner. However, repeated psycholinguistic studies of comprehension/perception, processing strategies and semi-experimental elicitation tasks have been unable to attain a consensus concerning how and when these constructions are acquired. It has been suggested by Bowerman (1979), in a review of the literature on complex sentence structures, that what was lacking from all of these studies was data on spontaneous speech production. It is with great interest, then, that we investigate the longitudinal, spontaneous production of relative clauses, cleft constructions and certain related wh-question constructions used by Sesotho speaking children slightly after the age of two.

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Paul Gorrell, Stephen Crain, and Janet D. Fodor, University of Connecticut

Contextual Information and Temporal Terms

We report on an experiment designed to identify how contextual information can influence children's performance on an experimental task involving temporal terms. Crain (1982) reported improved performance when subjects were provided contextual information for commands such as Push the plane after you push the bus, and suggested it was due to satisfaction of felicity conditions. However, it might result merely from task simplification due to advance information.

Our study distinguishes these factors by incorporating contextual information into the subordinate clause of the command (to satisfy felicity conditions) or into the main clause (to provide comparable information without satisfying felicity conditions). 56 children (mean age 4;5) participated in the study.

A two-way analysis of variance reveals a main effect for subordinate clause information ($p < .01$) but not for main clause information. We conclude that contextual information results in a significant improvement only when such information can be used to satisfy felicity conditions.

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Karin Stromswold, Massachusetts Institute of Technology & Harvard Medical School, and Steven Pinker, Massachusetts Institute of Technology

Questions About Wh-Questions

Transcript analyses. We analyzed the wh-questons in the CHILDes computer-readable transcripts for 10 children and found: (1) Performance varied for different wh-words, suggesting that children's question-forming rules are wh-word specific; (2) Subject questions were asked before object questions: (3) The purportedly non-occurring error of inverting subject and auxiliary in embedded questions occurred almost as frequently as the often-reported failure to invert in root questions. This suggests that children do not initially obey Emond's Structure Preserving Constraint (1976); (4) Children were conservative about what they will invert. In the entire corpus of questions there were only 4 examples of inversion of a non-auxiliary verb. (5) There were no examples of copying-without-deleting the wh-word or of wh-final questions. This suggests wh-questions are not formed by copying-and-deleting wh-words; and (6) Children rarely double-tensed questions, and when they failed to insert an obligatory auxiliary, they usually inflected the main verb of the question. We hypothesize that this is because the children know questions require one tense marker but they haven't mastered Do-support.

Experiment 1: Structure Preserving Constraint. To test whether children are sensitive to Emond's SPC, we asked 22 preschool children to judge root and embedded questions that did or did not exhibit subject-auxiliary inversion. Children judged root questions without inversion (e.g. Who Ernie is?) to be significantly worse than embedded questions with inversion (e.g. I know who is Ernie). This is the opposite of what would be expected if children have innately a structure preserving constraint.

Experiment 2: Tense inflection and do-support. Twenty-two preschoolers judged the grammaticality of questions that either had one, neither, or both of auxiliary and tensed main verb. We found that children did not perform identically for all wh-words. There were significant interactions between Wh-word and Aux and Wh-word and Tense. As predicted, children judged questions that had only one tense marker grammatical more often than questions with two or no tense markers. We expected children to do worse on questions with do than can, but we did not get this result.

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Peter Gordon and Jill Chafetz, University of Pittsburgh

Lexical Learning and Generalization in the Passive Acquisition

Children are worse at comprehending the passive when the verb is non-actional than when it is actional. Since children do not hear non-action verbs in the passive, this difference could result from simple verb-by-verb learning of the passive. This proposal was tested by looking at consistence of errors on individual verbs on test and re-test one week later. Twenty-two 3-to 5-year-olds were tested and re-tested on actional and non-actional passives. Probabilities of repeat errors for individual verbs ranged from .7 to .9 for different conditions, supporting a non-generalized lexical learning procedure. However, there was a great deal of improvement in performance from test to re-test, suggesting that there was also generalization taking place. A mixed model is proposed in which both lexical and generalized learning plays a role in acquisition of the passive.

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Letitia G. Naigles, University of Pennsylvania

Acquiring the Components of Verb Meaning from Syntactic Evidence

Verb learning was studied by asking whether children can induce new meaning components for known verbs when these verbs appear in new syntactic environments. In Experiment 1, children were asked to act out sentences containing common intransitive motion verbs, either in their ordinary intransitive sentential frames, or in ungrammatical transitive frames. The latter sentences elicited causative performances approximately 70% of the time for two-, three-, and four-year-old children; there was no progression with age. This indicates that even very young language learners can use the transitive frame to induce cause as a property of verb meaning. The hypothesis was then considered that it is the use of the explicit causative construction that produces recognition of the causal element (cf. Bowerman, 1982). In Experiment 2, children of the same age groups as above were asked to act out explicit causative sentences. Children above the age of three showed overwhelmingly causative performances; however, children under three showed poor comprehension of the explicit causative, although this age group had understood the novel lexical causatives in Experiment 1 quite well. Thus, comprehension of the former cannot be the mechanism which produces understanding of the latter. In sum, the notion of cause is available earlier than previously thought. More generally, information from syntactic structure is used even by the youngest learners to penetrate the componential structure of verb meaning.

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STORY COMPREHENSION AND PRODUCTION

Chair: Peggy Hoyt, Boston University

Wendy G. Lehnert, University of Massachusetts, Amherst

Plot Units and Narrative Summarization

In order to summarize a story, it is necessary to access a high level analysis of the story that highlights its central concepts. A technique of memory representation based on plot units appears to provide a rich foundation for such an analysis. Plot units are conceptual structures that overlap with each other when a narrative is cohesive. When overlapping intersections between plot units are interpreted as arcs in a graph of plot units, the resulting graph encodes the plot of the story. Structural features of the graph then reveal which concepts are central to the story, and which concepts are peripheral. Plot unit analysis is currently being investigated as a processing strategy for narrative summarization by both computer simulation and psychological experiments.

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Brian Reiser, Princeton University

Knowledge Structures in Comprehension and Memory

Understanding involves accessing and applying knowledge representations to make sense of the input. Knowledge about physical and social causality defines event and thematic knowledge structures that are used to understand behavior in a narrative or in real world events. These knowledge structures are also used to plan actions to achieve goals. Consequently, the same knowledge structures used to understand stories are used to organize memory for real world events. I will discuss research on knowledge structures demonstrating their role in directing the processes of text comprehension and the retrieval of memories for real world experiences.

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Nancy L. Stein, University of Chicago

A Model of Children's Storytelling Skill

Storytelling is a complex activity requiring the integration of several different types of knowledge. Three types of knowledge, in particular, influence and regulate the production of "good" stories:

1. knowledge of the structural regularities and causal connections inherent in social problem solving sequences;

2. knowledge about the different types of goal conflicts and appropriate resolutions of such conflicts;

3. knowledge about specific conditions that lead to goal failure or success (thematic knowledge).

Data will be presented that describe the development and acquisition of each type of knowledge. It will be shown that from the ages of 4 through 12 children's concept of a story changes significantly both with respect to the structural and content properties of the narrative. It will also be argued that acquiring specific knowledge about the properties of obstacles and the conditions for achieving valued goals is a primary regulator of the complexity of children's stories. Furthermore, direct instruction and exposure to the adult's conception of a good narrative appears to be necessary before children are able to consistently produce good stories.

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Thomas Trabasso, University of Chicago

Achieving Global Coherence of Story Understanding Through Local Cohesion

A recursive network transition model for depicting stories is described. The model assumes that stories are organized locally by events and their causal relations. These relations give rise to episodes and higher order structures with wide complexity and variation.

The model was used to generate two stories of contrasting structure: successive episodes organized by topic and embedded episodes organized by failed and successful goals. Understanding of these structures was investigated by having children in third through eleventh grades rate each event for its importance relative to the story.

The data show that the understanding of relations within episodes precedes that of between episodes. Third grade children understood as well as their older peers the importance of goals, actions and outcomes in anchoring episodes. Older children showed increased understanding of how settings and initiating events respectively allow or begin event chains, how failed outcomes generate new goals, and how successful outcomes enable new attempts.

Story comprehension appears to develop out of local understandings of relations between events. However, this achievement leads to greater appreciation of more complex, higher order structures.

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THE QUESTION OF NEGATIVE EVIDENCE

Moderator: Steven Pinker, Massachusetts Institute of Technology

Jane Grimshaw, Brandeis University

Linguistic Mistakes: The Role of Negative Evidence in Language Learning

There are two fundamental questions to be asked about negative evidence: is it in fact available from children's linguistic language learning process? The mere presence of some negative evidence in the linguistic input would not prove that it is critically involved in acquisition.

There appear to be three plausible sources of negative evidence in the learner's experience. Simple non-occurrence of sentences could be important, especially if there is strong reason to expect a particular example or configuration to occur. Under these circumstances non-occurrence might count as evidence for non-existence. The other sources of negative evidence stem from errors made by the learner: correction of errors, and adult misunderstanding of ungrammatical sentences. The basic fact here is that errors which do not occur in the learner's language can be neither corrected nor misunderstood. Anything the child learns privately, without public errors, could not have been learned through error-based negative evidence.

It has often been observed that children make remarkably few overt errors, and I will present some data on the range and number of errors, basically supporting this view. Moreover, the data shows that many errors persist over long periods of time, and this simple fact supports an argument that negative evidence (alone) cannot be the driving force behind eventual changes in the system.

Finally, it is important to consider how central the absence of negative evidence is to the current research program in learnability. After all, linguists have all the negative evidence they need, but they still can't write grammars as well as children can.

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Virginia Valian, University of Rochester

The Input to Language Acquisition

Adults provide children with information that their utterances are ungrammatical, but only indirectly and implicitly, and only as a subset of information about grammatical structure generally. Adult replies to child utterances were analyzed for 6 child-parent pairs. Parents make replies which are structurally similar to the child's utterance roughly equally whether the child's utterance is grammatical or ungrammatical. Of structurally similar replies to ungrammatical utterances, about two-thirds involve implicit corrections of the child's errors. Parents are not particularly sensitive to the grammaticality of the child's utterance but cannot avoid giving corrective input much of the time when giving a structurally similar reply.

On a hypothesis-testing model the child could exploit structurally similar replies by comparing her utterance with the adult reply. Any structured utterance by the child can be taken as the output of a hypothesis, and structurally similar replies

by the adult serve as relevant evidence. A complex relation between the child's productions and the adult replies is exploited by the child's learning mechanism to infer ungrammaticality and constituent structure.

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Michael Maratsos, University of Minnesota

On the Roles of Input and Tabulation

This paper falls into two parts. In the first part, empirical evidence is considered which reinforces the conclusion that, at best, adult feedback offers confusing evidence to the children about grammaticality versus ungrammaticality of the child's utterances including evidence from phenomena such as repetition and partial repetition of the child's utterances.

In the second part it is argued that for a wide range of problems, common emphases on learnability theory on mechanisms on quick decisions about productivity of constructions such as the Uniqueness Condition are empirically clumsy. And such mechanisms are compared to more inductively based mechanisms such as Rumelhardt and McClelland's Parallel Distributing Processing models.

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Kathy Hirsh-Pasek, Haverford College, Roberta Michnick Golinkoff, Susan M. Braidi, Louise McNally, University of Delaware

"Daddy throw": On the Existence of Implicit Negative Evidence for Subcategorization Errors

Since the landmark Brown and Hanlon chapter in 1970 it has been assumed that children do not receive negative evidence responsive to their grammatical errors when interacting with their parents. The assumption of the absence of negative evidence in input has theoretical implications for how much the learner must self-correct from positive or indirect negative evidence in order to produce sentences which conform to the grammar of the target language. We examined 6 hours of Brown's Adam when Adam was 2;3. Many subcategorization (and other) errors were found which Adam's mother treated by querying for or providing missing arguments or particles. She did not repeat or query subcategorization frames used correctly. These data suggest that implicit negative evidence for inappropriate subcategorization is at least available to the child. Whether the child uses this information is a subsequent question.

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Kenneth Wexler, University of California, Irvine

Negative Evidence and Learnability

Negative evidence is often taken to mean that a difference exists in the environment after a child speaks a grammatical sentence compared to when she speaks an ungrammatical sentence. The important question, however, is whether this difference is usable and whether it is used. For example, it is sometimes argued that the statistical difference in the response patterns after an ungrammatical sentence compared to a grammatical sentence. But there's reason to believe that human children, as opposed to abstract learning devices, can't make use of this kind of information. A number of examples from the empirical literature on parameter setting in language acquisition serve to demonstrate the difficulties. Basically the use of statistically-based negative evidence will lead the child to make a large number of mistakes and to be an extremely slow learner.

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LANGUAGE BEHAVIOR IN SPECIFIC POPULATIONS

Chair: Kristine Strand, Kennedy Memorial Hospital for Children, Boston

Phil J. Connell, Northwestern University

Teaching Subjecthood to Language Disordered Children

One of the claims of the functional theory of language is that subject properties (subject-verb agreement, nominative case and certain transformations) historically derive from changes that occur in the pragmatic structure of sentences. The applicability of this claim to language impairment was assessed by teaching four language-disordered children, who had not learned subject properties, to change their pragmatic structures in the manner that is predicted by the theory. The results of teaching support the claim in terms of the predicted order of acquisition and the generalization of subject properties. The findings suggest that the functional theory has diagnostic and treatment implications for clinical work with language-impaired children.

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Laurence B. Leonard, Purdue University, Letizia Sabbadini, USL RM1, Rome, Virginia Volterra, Instituto di Psicologia, CNR, Rome, and Jeanette S. Leonard, Purdue University

Specific Language Impairment in Two Languages: Converging Evidence

This study presents data on the role of phonological factors in the extraordinary difficulties children with specific language impairment (SLI) have with particular grammatical features. Data are presented from eight monolingual English-speaking and eight monolingual Italian-speaking SLI children matched for mean length of utterance in words. For those morphological features marked by a word-final vowel in Italian and a word-final consonant in English, the Italian SLI children showed greater percentage of use than their English-speaking counterparts. However, an examination of the children's use of articles revealed that the Italian SLI children had considerable difficulty using those Italian articles requiring word-final consonants. Their use of articles involving word-final vowels was comparable to the English-speaking children's use of *the* and *a*.

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Janice Corazza and Nan Bernstein Ratner, University of Maryland, College Park

When 'Stand' is 'Sand', But 'Sick' is 'Stick': An Acoustic Analysis of an Unusual Articulation Pattern

Acoustic analysis of an unusual articulation pattern revealed that a 4.8 year old boy who apparently randomly interchanges /s/ and /st/ (sand/stand;stick/sick), exhibited atypical segment duration for /s/ in intended clusters when compared to singleton /s/ productions. Expected decreased segment duration in initial /s/ clusters was absent. Rather, segment duration for singleton /s/ productions were the shortest, and /s/ durations for intended /st/ productions were the longest. We speculate that this child has difficulty planning and producing clusters which leads to increased segmental durations during the execution of complex sequences.

Longer segment durations are often associated with acquired apraxia, and in this case, support a clinical impression of developmental apraxia. Acoustic analysis may offer supplemental reinforcement of clinical impressions of developmental apraxia.

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Therese Baumberger, Jill de Villiers and Peter de Villiers, Smith College

Phonological Schemas for the Past Tense: Oral Deaf Versus Hearing Children

Effects of phonological form and the contribution of rote versus rule learning on the acquisition of the past tense were explored in two populations. Twenty one profoundly deaf children aged seven to thirteen years and enrolled in an oral school, and nineteen hearing four year Olds were tested for performance on eight irregular and three regular past tense categories defined by phonological form, following bybee and slobin (1982). Two tasks were used to elicit the past tense, one with pictured actions and the other videotaped cartoon clips. Written narratives describing picture sequences were also collected from the deaf subjects. Results showed that the hearing children's control of the irregular forms was related to the phonological form of the verb, but this was not true for the deaf children. Performance on regular past tenses was very low for the deaf children compared to the hearing children. It is proposed that the deaf children do not yet have a productive past tense rule, and in consequence have not extracted a phonological schema for the past tense.

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Lynne Feagans, Elaine Fields and Dale Farran, The Pennsylvania State University

Questions and Answers: Social Class Differences

The question-answer format is one teachers use in teaching and evaluating students. Social class differences have been found in children's answers to abstract questions. This may have implications for the learning context for children from different social classes. The present study examined the nature of these differences and what strategies teachers use with children who give wrong answers. Eighty children were in the study. Twenty poverty children had preschool intervention, twenty poverty children had no preschool intervention. Each poverty child was matched with a child of the same sex from his kindergarten classroom. Each teacher showed each child a wordless picturebook and asked easy and difficult questions about the story. Social class differences were not evident on the number of correct answers but on the type of wrong answers given. Teachers were found to have great difficulty following up on certain kinds of wrong responses, ignoring or even reinforcing these wrong answers. Implications for language and learning are discussed.

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FIRST LANGUAGE ACQUISITION II

Chair: David K. Dickinson, Tufts University

Denise E. Segal, Tufts University

The Use of Non-Ostensive Words in Varied Linguistic Contexts: A Study of Word Awareness in 6-12 Year-Olds

This study investigates word awareness in 6-12 year-olds. Current theories of word meaning fail to account adequately for development, beyond the acquisition period, of words such as pain, same, and pretend, the learning of which cannot be primarily explained by means of ostensive definition. The present researcher argues that the meaning of the word stems, in part, from the word(s) with which it co-occurs in the language.

Tasks included metalinguistically-phrased questions and picture-story sequences. These were administered individually thereby affording additional probing. Responses were analyzed at different age levels and are presented together with verbatim transcripts and qualitative descriptions.

It was found that:
1) a word alters its meaning according to the linguistic context in which it occurs.
2) a comprehensive account of the word's meaning could be established from a diversity of tasks.
3) a developmental sequence emerged for the strategies employed by children of different ages in answering the questions posed.

The results of this study have implications for research in the area of metalinguistic awareness, for vocabulary testing, and for current theories of word meaning.

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David K. Dickinson, Tufts University

Learning Names for Materials: Linguistic and Conceptual Constraints

Children have been shown to be remarkably facile at learning new words (Carey, 1978; Dickinson, 1984). Acquisition has been hypothesized to be assisted by efficient use of varied sources of constraints narrowing possible hypotheses for word meanings. Acquisition of words naming materials was studied. Three to five year olds heard new words in varied syntactic frames applied to unfamiliar intact objects made of an unusual material, to three chunks of a strange material, or to strange non-solid substances. Forced choices tapped children's induction of the meaning of the terms. When material names were presented as mass nouns, which should help children realize the words applied to material kinds, children failed to realize the words named materials if the experimental item was an intact object. This result indicates that conceptual constraints are far more important than syntax in assisting children in learning that new words refer to material kinds. Evidence also suggests that consolidation of conceptual domains positively affects word learning.

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Nancy W. Streim and Robin S. Chapman, University of Wisconsin-Madison and Waisman Center on Mental Retardation and Human Development

A Case Study of the Fast Mapping of Novel Action Verbs: The Roles of Event and Discourse Context

Extension of novel vocabulary to new contexts was investigated in a case study of a 2:0 year old child (MLU = 2.1). Four novel actions with labels were introduced in breakfast and lego-play over 14 days. From day 1, actions were demonstrated and labelled daily in one "primary" context. From day 2, the actions were presented in a "secondary" context, but not labelled until day 8. One of the four actions was labelled in both contexts throughout the study. Both production and comprehension of novel words were probed. Breakfast and lego conversations were tape-recorded, and notes taken throughout each day on other occurrences of novel actions or words. The transcript shows immediate imitation of novels in primary contexts, followed within days by spontaneous production. Actions were imitated immediately in secondary context, but word production only occurred after labels were provided. Implications for the mental representation of linguistic knowledge are discussed.

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M. Jeffrey Farrar, University of Denver

Discourse and the Acquisition of Grammatical Morphemes

Recasts have been identified as an important form of input for language acquisition. However, most studies have reported only general relationships and have ignored the causes of these effects. The current study sought to determine: (1) if recasts that model specific grammatical morphemes facilitate acquisition of these morphemes; and (2) the features responsible for these effects by comparing the effectiveness of recasts to other discourse forms (i.e., expansions, topic continues, and topic changes) that vary in their relationship to the child's sentence. Twelve mother-child dyads were videorecorded during one hour of naturalistic interactions when the children were 22 and 28 months of age. Results indicated that recasts were related to the acquisition of bound grammatical morphemes. Free grammatical morphemes were facilitated by topic continues. It was argued that recasts produce their effects because of their unique reformulation component which identify bound morphemes as distinct lexical items. In contrast, free grammatical morphemes have many ways they are highlighted in input which can occur in all discourse models.

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Gary A. Cziko, University of Illinois, Urbana-Champaign

Testing the Language Bioprogram Hypothesis: A Review of Children's Acquisition of Verbs

Two components of Bickerton's language bioprogram hypothesis were empirically tested by reviewing studies of children's acquisition of verbs. A total of approximately 60 empirical studies of children's acquisition of verbs were initially reviewed with 13 of these representing nine languages reporting findings relevant to the state-process and/or punctual-nonpunctual hypothesis. A secondary analysis of the results of these 13 studies found considerable support for both the state-process and punctual-nonpunctual hypotheses. These findings suggest that as predicted by the language bioprogram hypothesis, children universally distinguish stative from process verbs and punctual from nonpunctual verbs in the early stages of language acquisition.

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INTERACTION

Chair: Marie Chesnick, Boston University

Lori J. Van Houten, Brown University

The Role of Maternal Input in the Acquisition Process: The Communicative Strategies of Adolescent and Older Mothers with their Language Learning Children

This longitudinal study tested the hypothesis that the nature of adolescent mothers' communicative input contributes to their children's poor performance on standardized tests. 10 adolescent and 10 older mothers (mean age = 16.5 and 24.5, respectively) and their firstborn children were videotaped in 3 different communicative settings at 8 months and 2 years. Videotapes were coded for grammatical complexity, discourse and pragmatic role of each utterance.

Despite adolescent mothers' use of a directive/less-responsive style of input and older mothers' use of a conversation-eliciting/responsive style, both groups of children appeared to be acquiring language at the same rate. Children of adolescent mothers still performed more poorly, however, on standardized tests. A review of the data showed that adolescent mothers were less likely to use the decontextualized, syntactically complex language used on standardized tests. Thus, caregivers' communicative strategies could affect children's acquisition of general linguistic abilities and situation specific forms of language.

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Barbara L. George, Emory University

The Effect of Variation in Conversational Style on Children's Linguistic and Conversational Performance

This study was designed to experimentally determine whether variation in adult conversational style affects children's linguistic and conversational performance. Two mechanisms of action were proposed, constraint and topic maintenance. Fourteen two-year-old children were seen individually in a freeplay session. Each child was presented with four conversational styles: A) low-constraint/on-topic, B) low-constraint/off-topic, C) high-constraint/on-topic, and D) high-constraint/off-topic. Results indicated that the manipulation of constraint affected syntactic/semantic, sentence-type, and conversational measures of the children's language. The manipulation of topic maintenance independently affected conversational and sentence-type measures. This study provides experimental evidence that variation in conversational style does affect child language. These findings support previous correlational findings and pinpoint the mechanisms through which CDS may be exerting its influence. The effect of the adult's intent on verbal and nonverbal domains of behavior is also discussed.

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Ann R. Eisenberg, University of Texas, San Antonio

Dyads, Triads, and More: Preliminary Analyses of Complex Family Interaction

This paper discusses new interactional structures that arise when conversations with young children include more than 2 participants. Participants in the study were 2 Spanish-speaking, Mexican immigrant families. Tape recordings of conversation between the target children and their families were collected at 3-week intervals for a year, beginning when the target child was 2;0. Participants in the recording sessions included the target child, her parents, her infant sibling, and additional relatives and visitors. Multi-party conversations described include teasing, instructions about what to say, and the use of "lateral speech acts to obtain support, involve younger children in an interaction, and control others. The paper also describes the development of the ability to employ such conversational structures. It is suggested that multi-party interactions may be important situations in which children learn to decenter, to resolve conflicts, and to create alliances with others to achieve conversational goals.

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Julie Simon, State University of New York, Albany

Early Language Skills and Symbolic Play Development: A Cross-Sequential Look

This study was designed to investigate two strands of nascent symbolic behavior, language and symbolic play across the second year. A cross-sequentially designed study was conducted in the homes of 15 infants ranging in age from 12 to 24 months who were observed monthly for six months.

Structural and temporal patterns of interdependence were found between specific linguistic abilities and object substitution appeared contemporaneously within the second year. Non-referential language use was relatively modestly related to object substitution and language comprehension was found to be relatively independent of the ability to substitute objects in play. Further, language comprehension was highly related to infants' ability to enact play suggestions during symbolic play with conventional props. Language comprehension did not facilitate children's use of play suggestions with non-prototypic toys.

These findings tend to support theoretic notions of asynchronies across verbal and nonverbal domains of symbolic function.

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THEORETICAL ISSUES IN THE ACQUISITION OF GRAMMAR: EVIDENCE FROM CHILDREN WITH SENSORY, COGNITIVE, OR NEUROLOGICAL DEFICITS

Organizer and Chair: Helen Tager-Flusberg, University of Massachusetts, Boston

Jill de Villiers and Peter de Villiers, Smith College

Parallels and Divergences in the Acquisition of Oral English by Deaf and Hearing Children: Evidence for Structural Constraints

The pattern of normal language acquisition is determined by a complex set of interactions among the factors of linguistic complexity, cognitive development, and the nature of the input. Profoundly deaf children exposed only to oral language provide an interesting population for language researchers who wish to tease apart these variables. Deaf children receive a radically different input, much of it through formal instruction and exposure to written language, and because of the great delay in acquisition, they are more cognitively advanced than a hearing child at the same linguistic stage. In fact, many aspects of complex English syntax are acquired after puberty, the end point of the postulated critical period for language learning. Our current research seeks to determine the parallels and differences in the acquisition of English syntax between deaf and hearing children. Where close parallels exist, it is possible to argue that structural constraints are the major determinant of the course of acquisition. Divergences point to the influence of other variables, such as the nature of the input or cognitive development. Results of several studies will be discussed, in which the acquisition of productive use of coordinate structures, relative clauses, past tenses, articles and pronouns are detailed. In the case of coordinate sentences and relative clauses, close similarities in the pattern of development are observed, despite differences in age and cognitive maturity. However, considerable differences are found in the mastery of the past tense, and in articles and pronouns. Explanations for these findings are explored, including the role of stress and intonation, and the claim by Gleitman and her colleagues that some aspects of language are robust, possibly universal, and independent of input, while others are more fragile, language-specific, and dependent upon the nature of the child's experience.

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Susan Goldin-Meadow and Carolyn Mylander, University of Chicago

Development of Morphology Without a Conventional Language Model

We have observed children who have not been exposed to conventional linguistic input in order to isolate the properties of language whose development can withstand wide variations in learning conditions -- the "resilient" properties of language. The children we study are deaf with hearing losses so severe that they cannot naturally acquire oral language, and born to hearing parents who have not yet exposed them to a manual language. In our previous work we found that, despite theirimpoverished language-learning conditions, these deaf children developed gestural communication systems which have structure at the sentence level of analysis (i.e., structure across gestures in a string). The present study suggests that the deaf child's gesture system, like all natural languages, also has structure at a second level of analysis, the level of the morpheme (i.e., structure within gestures as well as across them).

Ten hours of videotape taken of home observations of one deaf child (ages 2;10 to 4;10) of hearing parents were transcribed and analyzed for structure at the sign level. Approximately 500 signs were coded in the videotape sample. We found that (1) the child had a limited set of discrete hand and motion forms which comprised his lexical items (i.e., he used only 10 different handshape forms and 9 different motion forms in his 500 signs), (2) particular hand or motion forms were consistently associated with particular meanings (or sets of meanings) throughout the child's lexicon (e.g., the handshape form 'palm with the fingers spread' was consistently associated with the meaning `small particles' [as in snow], and (3) particular hand or motion forms recurred across different lexical items and thus were not limited to a single and (for the child) potentially unanalyzed lexical item (e.g., the 'small particles' handshape morpheme was used in at least 2 different signs, once with a `linear path' motion morpheme to mean "snow-flutters"). Thus, the deaf child's signs appeared to be decomposable into smaller morpheme-like components, suggesting that the gesture system was indeed structured at the sign level.

These results suggest that a child can develop the rudiments of a structured communication system -- including structure at a morphological level -- even without a conventional language model to guide his development.

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Helen Tager-Flusberg, University of Massachusetts, Boston

Constraints on the Process of Grammatical Development: Evidence from Autistic and Down Syndrome Children

Several researchers have proposed that the process of language development in autistic children, and even in children with Down syndrome may be quite deviant, that is different than in normally developing children. It is clear that in both these populations language is significantly delayed relative to cognitive development, and it has been proposed that these delays may lead to differences in acquisition patterns. This paper will present spontaneous speech data collected longitudinally from six autistic children and four Down syndrome children, as well as some cross-sectional experimental data. The focus of the language analyses will be on a number of aspects of grammatical development, especially between Stages II and V. The question of whether the disordered children rely on different acquisition strategies, for example "gestalt" processing of language, will also be addressed. The results of these analyses suggest that there are no basic differences between normal, Down syndrome or autistic children in how they acquire the basic syntax of language. Discussion will center on the implications of these findings for cognitive or social theories of language acquisition, and the nature of the constraints on grammatical development.

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Barbara Landau, Columbia University

From Syntax to Meaning in First Language Learning

(Abstract not available)

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Anne Fowler, Haskins Laboratories

Maturational Determinants and Constraints in Rate of Language Growth in Children with Down Syndrome

Growth curve measures for MLU and internal measures of language growth (Scarborough's Index of Productive Syntax) are presented for eleven children with Down syndrome ranging in age from 4 years to 18 years. Data were collected twice yearly (more frequently for younger children) for periods ranging from 3 to 6 years. Of particular interest is the relative contribution of MA, CA, and Language Stage in determining the alternation of periods of rapid growth with periods of no growth.

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Elissa Newport, University of Illinois

The Effect of Maturational State on the Acquisition of Language

Lenneberg (1967) suggested that language acquisition must occur within a limited maturational period in order for a normal acquisition process, and a totally fluent outcome, to result. However, direct evidence for this hypothesis has been difficult to obtain, since virtually all humans acquire their first language early in life. The studies I will report focus on congenitally deaf individuals for whom American Sign Language (ASL) is the first language. Unlike hearing people, the deaf may be exposed early in life only to a language which they will not succeed in acquiring (typically spoken English); their exposure to their first effective language (ASL) may occur much later.

Our studies investigate the mastery of ASL shown by deaf adults who have varied in the age at which they were first exposed to the language, from earliest infancy to adulthood. The data indicate a linear relationship between age of acquisition and performance on English as a second language (ESL) for hearing individuals. The data on both first and second language acquisition therefore support the notion of an effect of maturational state on the acquisition of language. I will review several models of acquisition which are compatible with such a maturational effect, and try to speculate about why maturation may have such consequences for language learning.

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Ann Peters, University of Hawaii

The Interdependence of Social, Cognitive, and Linguistic Development: Evidence from a Visually Impaired Child

For an otherwise normal but severely visually impaired child, limited access to visual information makes him more dependent than a sighted child on language, both as a source of information about a world he can't see, and as a means of social interaction in the absence of eye contact. For this child, the data base he has available for the discovery of the formal structure of his language is heavily influenced by his cognitive and social need for what that language can do for him. These influences include the context specificity of the input he receives, difficulties he has in generalizing across contexts, and heavy reliance on formulaic language. Linguistic consequences include context specificity of early V + NP combinations and difficulties in analyzing the particle-preposition on.

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Richard Cromer, MRC Cognitive Development Unit

Case Studies of Dissociations Between Language and Cognition

Current thinking on language acquisition has tended to emphasize the cognitive underpinnings of linguistic competence and to regard the mastery of some intellectual tasks as necessary for language acquisition to occur. However, cases have been reported in which language was acquired by moderate and severely retarded individuals who were unable to master these basic cognitive abilities (e.g., Curtiss, 1981). Such children acquired complex syntax, but their limited conceptual abilities affected the semantic and pragmatic components of their language. Other specific groups of children have also been reported who show a large dissociation between language and intellectual abilities ("cocktail-party syndrome"; see Hadenius, et. al., 1962). Most of these children have spina bifida with internal hydrocephaly, and they show excellent linguistic abilities in spite of very limited intellectual functioning. Two cases will be presented in which not only the syntactic, but the semantic and pragmatic components of language are highly developed. This is in marked contrast to intellectual abilities and processing mechanisms which are severely impaired. Assessments of both linguistic and non-linguistic cognitive abilities will be reported and the implications for modular and non-modular theories of language processing will be considered.

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Ursula Bellugi, Salk Institute

Dissociations Between Language and Spatial Functions

(Abstract not available)

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SYMPOSIUM ON LITERACY

Moderator: John Trimbur, Boston University

David K. Dickinson, Tufts University and Catherine E. Snow, Harvard University

Language-Literacy Relationships in Kindergarten

The interrelationships among indices of early reading ability, language ability, and phonemic awareness were studied in a group of 33 kindergarteners from middle class and lower class homes. All children were attending full day kindergartens. Children were administered a battery of tests including three tests of early reading skills, two tests of writing ability, two tests of phonemic awareness, three tests of decontextualized language ability, and the Peabody Picture Vocabulary Test. It was predicted that decoding skills, writing and phonemic awareness variables would be correlated and only weakly related to social class, and that decontextualized language would be related to social class but not to the indices of early literacy.

Preliminary analyses reveal social class differences on the decontextualized language measures, but not on the measures of early reading and writing ability or on the PPVT. Results support the hypothesis that during initial stages of reading development, language and literacy develop in parallel. The results also reveal the beneficial effects of participation in high quality early education programs on reading development of children from all backgrounds.

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Caroline Zinsser, Center for Public Advocacy Research, Inc.

Learning to Be Literate in a Fundamentalist Sunday School

How five-year-old children learn literacy skills within a church setting is documented by observations made during a two-year ethnographic study of a fundamentalist Sunday school. The findings indicate that children are shaped by the cultural forces of family and community institutions into learning patterns that precede those established through public schooling. Children in the church are taught to obey authority, to practice a specific form of pedagogical discourse, to regard textual meaning as non-negotiable, to apply text to life, and to listen, to memorize, and to recite. They also learn to distinguish the frame of religious content and to respond to it appropriately. The study concludes that some of the beliefs and practices of the fundamentalist teachers contrast with those of the larger, mainstream culture and so provide an example of cultural discontinuity, but that many of the methods practiced in the church classrooms are the same as those of the American public schools.

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Adrian T. Bennett, The Lexington Center

Meaning and Truth in the Struggle for Literacy

It ought to be, but isn't, a commonplace that the meaning of literacy is relative to its use, and that its uses are socially constrained. Sociolinguists and other social scientists have attempted to look at literacy in its social contexts. They have shown that its meanings and uses are not universally the same everywhere, but vary from one social context to another. Literacy is generally what people make of it because the human mind is not determined by the medium through which it communicates, and because people are agents in their own history.

But the same social scientists who have shown the variability of literacy have not been able to explain it. They have either ignored, or been unable to cope with, certain crucial features of most societies where literacy exists: power, human agency, history, change, and the dynamics of cultural process.

Perhaps a concept of literacy as part of the dynamic struggle for voice, power, truth and knowledge that comprises the discourse of all societies can be useful in explaining the uses and meanings of literacy for people in specific social contexts. I will explore the uses of such an approach, and its relevance to understanding how literacy is "acquired", using an ethnographic study of literacy instruction in three classrooms in East Harlem as a touchstone.

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Brian V. Street, The University of Sussex

Literacy Practices and Literacy Myths

The major "myth" of literacy is that of the "great divide", whereby the acquisition of literacy, whether by social groups or by individuals, is seen as representing a leap forward in logical, cognitive, philosophical and other processes. A "literacy/orality" divide is thereby substituted for such earlier distinctions as "logical/pre-logical", "primitive/modern", etc.

I will argue, through close analysis of recent texts, that the myth remains implicit in much linguistic and psychological research, even where it has been explicitly rejected. This can be explained through the methodological and theoretical assumptions underlying such work: in particular a narrow definition of social context, related to the split in Linguistics between pragmatics and semantics; the reification of literacy in itself at the expense of recognition of its location in structures of power and ideology, also related to general assumptions made by linguists about the "neutrality" of their object of study; and the relations of meaning to syntax, rather than to the whole set of concepts and classifications that make up a society's culture.

I shall attempt to develop the concept of literacy "practices" as a means of overcoming these problems and of facilitating ethnographies of literacy on which valid cross-cultural generalisations can be based.

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David R. Olson and Janet W. Astington, Ontario Institute for Studies in Education

Talking About Texts: How Literacy Contributes to Thought

Although there is wide-spread agreement that literacy contributes to the development of a "standard" language and to more systematic and explicit forms of thought, there is less agreement as to how these changes come about.

In this paper we argue that writing has its effects through altering the social practices -- law, theology, science, philosophy -- in which it is used. One such use is the preservation and subsequent interpretation of socially valued texts for which it is important to distinguish what a text says from the author's intention in saying it, from the commentator's attitudes to it, and so on. To mark such distinctions requires the elaboration of a set of epistemic or mental state and speech act terms, such as assume, hypothesize, conclude, infer, interpret, state, claim, and concede.

In this paper we explore the hypothesis that children's acquisition of such concepts is an important part of literate competence.

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Mary E. Curtis, Harvard University

Vocabulary, Literacy, and Schooling

The relationship between vocabulary and comprehension is well established. Vocabulary measures are excellent predictors of individuals' ability to comprehend and of the likelihood they will succeed in school. Furthermore, vocabulary is related to years of schooling, and has been used to estimate literacy levels. In this paper, two aspects of vocabulary will be discussed: (1) the knowledge students have about word meanings, and (2) the ways they use to figure out meanings of unfamiliar words. Protocols from college students will be used to illustrate that, although these aspects of vocabulary are related, they may be viewed best as separable components of literacy and schooling.

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Niko Besnier, University of Illinois, Urbana-Champaign

Spoken and Written Language Differences in a Restricted Literacy Setting

This study is an analysis of spoken-written language differences on Nukulaelae, an incipiently literate society in the Central Pacific. Exploiting a large computerized corpus of naturally produced spoken and written texts, this study tests the cross-linguistic validity of the hypothesis that spoken language is more "involved" and less complex than written language. The results of a multivariate analysis of the frequency of co-occurrence of selected linguistic features show that, like in English, three dimensions must be identified to distinguish between Nukulaelae genres: involvement-detachment; structural complexity; and evidentiality. However, on Nukulaelae, spoken language is not more involved and less complex than written language; rather, involvement and complexity are a function of the communicative norms at play in each genre, and are not universal properties of spoken and written language differences. This research provides linguistic evidence for the view that literacy is not a cross-culturally unified phenomenon.

SECOND LANGUAGE ACQUISITION

Chair: Bruce Fraser, Boston University

Lydia White, McGill University

The Principle of Adjacency in Second Language Acquisition

It will be shown that L2 acquisition is affected by the way parameters of Universal Grammar have been set in the L1, using the principle of adjacency of case assignment proposed by Stowell (1981), whereby case assigners must be adjacent to the NPs to which they assign case. Adjacency requirements vary: English requires strict adjacency whereas French does not. Learners of ESL and FSL were tested to elicit their judgments on adjacency violations. Many of the ESL learners accepted English sentences which were grammatical in their L1 but not in the L2, whereas the FSL learners rejected French sentences which were ungrammatical in their L1 but not in the L2, suggesting transfer of the L1 parameter in both cases. However, the judgments of some subjects not only indicated the ability to reset to the L2 value of the parameter but also that this involves subtle knowledge, stemming from UG, as to the precise working of the parameter in L2.

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Nancy R. Mahecha, The Graduate Center of CUNY

The Evolution of Code-Switching Behavior in a Spanish-English Bilingual

This two-year longitudinal study was to determine how code-switching behavior changed in a Spanish-English bilingual girl as her competency in English increased.

Code-switching data were obtained from videotapes (at ages 2.7, 3.3, 3.11, and 4.5 years) while subject interacted with her mother and another bilingual in naturalistic play contexts. The base language was defined before each session. Code-switches were classified as being intra-sentential or extra-sentential.

The results indicated that:

- -frequency of code-switches increased from Spanish to English (S-E) but decreased from English to Spanish (E-S);
- -code-switches became more intra-sentential from S-E:
- -extra-sentential code-switches decreased in either direction;
- -the interaction between the underlying grammars increased as intra-sentential code-switches increased; and
- -transitional code-switches existed which often violated adult code-switching rules.

This study suggests the possibility of using type of code-switching as an index of underlying competence (dominance) and the value of longitudinal studies to observe transitional stages in the evolution of code-switching behavior.

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Leslie Rescorla, BrynMawr College, and Sachiko Okuda, Daito Bunka University

Modular Patterns in Second Language Acquisition

Analysis of data from the first six months of acquisition of English as a second language by a 5-year-old Japanese girl illustrates the role of modular "chunking" and coupling in the L2 acquisition process. This process was apparent in the child's pre-copula and copula referential utterances. The subject produced a large number of creative and novel referential sentences by using a small number of patterns or modules. The same small set of patterns was seen in both adult and peer sessions, although advances in acquisition usually appeared in peer conversations before they were evident in adult session data. The child's prefabricated modules served as frames which she varied by lexical substitution. These modules were concatenated to form sentences, suggesting an L2 acquisition process which was a synthesis of formulaic patterns into creative constructions.

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Janice Johnson, York University

The Developmental Growth of Metaphor Comprehension in Children's First and Second Language

The study examines the effect of developmental and linguistic variables on children's metaphor interpretations. Subjects are Spanish-English and monolingual English children at ages 7-8, 9-10, and 11-12 years. The samples are English middle-class vs. working-class, and Hispanic long-term residents vs. recent immigrants to Canada. These developmental samples differed widely in measured English proficiency but were equated on mental capacity (i.e., nonverbal working memory, developmental level). The hypothesis that metaphoric processing is constrained more by mental-attentional capacity than by linguistic sophistication is tested.

Using a previously validated procedure, metaphor interpretations were scored for cognitive complexity. Metaphor score increased significantly with age for all samples, and the developmental curves were perfectly colinear across samples. English middle-class subjects performed significantly better on metaphor; Hispanics did not differ in English metaphor performance from their English working-class schoolmates, nor did length of residence affect their English metaphor scores. Mental capacity (measured nonverbally) was the major predictor of metaphor performance in the English middle-class and in both Hispanic samples; only in the English working-class did English proficiency account for substantial variance beyond that accounted for by mental capacity.

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Loriana M. Novoa, Harvard University

The Word-Retrieval Process and Reading Acquisition and Development

Research in the cognitive and neurosciences has consistently documented a strong relationship between word-retrieval and reading success and failure (Denckla & Rudel, 1976). Virtually no research, however, has investigated the relationship between word-retrieval and reading in bilingual children who presumably have multiple labels for each referent.

The present study is an investigation of the word-retrieval/reading relationship in bilingual children. A cross-sectional sample of 80 children divided into 4 age groups and two reading levels were administered a battery of reading and naming tests in both Spanish and English.

Emphasized will be: 1) The significant differences between bilingual average and poor readers in specific naming measures; 2) the significant differences between bilingual and monolingual children on many naming measures; 3) the significant differences bilingual children evidence between their two languages on naming measures; and 4) how different word-finding patterns in bilingual and monolingual children may affect the acquisition and development of reading.

POSTER SESSIONS
Saturday and Sunday

Marjorie Beeghly, Harvard University, and Dante Cicchetti, University of Rochester

Early Language Development of Children with Down Syndrome: A Longitudinal Study

The early language development of 41 children with Down syndrome and several matched groups of nonhandicapped children was assessed longitudinally over the course of one year. At the first visit, children ranged in level of language development from prelinguistic to early multiword speech. The prelinguistic children were at a level of cognitive development at which first words might be expected. Measures of children's productive and receptive language (syntax, vocabulary, pragmatics) were coded from videotapes of mother-child interaction in several contexts during 3 2-hour laboratory visits spaced 6 months apart. In addition, mothers were interviewed about their children's language development. Results indicated that although the language development of children with Down syndrome progressed very little during the year, the course of development was similar to that observed in the nonhandicapped children. However, in contrast to the nonhandicapped children, the syntactic development of children with Down syndrome was markedly delayed in relation to their vocabulary and pragmatic development. Individual differences in the rate of language acquisition were striking for children with Down syndrome.

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Marie B. Caulfield, Francine L. Falco, Grover J. Whitehurst, and Janet E. Fischel, State University of New York at Stony Brook

A Microanalysis of Parent-Child Language Interactions

In recent years there has been an increased interest in the role of adult-child verbal interaction in the process of language acquisition. While evidence from naturalistic and experimental studies suggests that children's language development is affected systematically by adult verbal stimulation, no normative data exists on the sequential dependencies between parent and child language. The present research is the first large-scale microanalysis of sequential dependencies in the language interactions of young children and their parents in the home. Data were obtained from audiotapes of language mealtime interactions of twenty preschoolers and their families. Analyses focused on the frequency of occurrence of major categories of parental and child language, and the sequential dependencies between these categories. Consistent patterns of parent-child interaction were found across families, many of which are consistent with a social interactional model of language acquisition.

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Barbara D. DeBaryshe, Grover J. Whitehurst, and Janet E. Fischel, State University of New York at Stony Brook

Referential and Expressive Speech Styles in Children with Delayed Productive Language

This study investigates the referential-expressive distinction in children with expressive language delay. Referential children show a high proportion of general nominals in their vocabularies and learn language at a faster rate than expressive children. Expressive children use more non-nouns, and produce more jargon, formulaic and stereotyped speech. Many of the characteristics of expressive speech suggest that these children have less advanced language skills. Nine 30-month-old children with delayed expressive language served as subjects; these children had normal receptive language skills. Results demonstrate that the expressive speech style is characteristic of children with delayed speech. At the 50-word vocabulary level, eight subjects were expressive speakers. An intervention designed to increase referential speech had little impact on the children's speech style although it was highly effective in increasing the children's language skills.

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M. J. Demetras, The University of Arizona

Availability of Corrective Feedback in the Conversational Responses of Working Parents to Their Two-year-old Children

Despite claims by learnability theorists, investigators have recently shown that corrective feedback is, indeed, available to children via parental conversational responses. Furthermore, particular types of parental responses appear to be differentially produced to well-formed vs. ill-formed child utterances. These reports suggest the need to shift the focus of analysis to implicit or more subtle types of parental responses in combination with explicit responses in order to more fully evaluate the potential source of negative evidence in the conversational responses of parents to their children learning language.

The present study described explicit and implicit responses in the conversations of working mothers and fathers to their normally developing two-year-old sons, and investigated whether responses were differentially produced to well-formed vs. ill-formed child utterances. Subjects were eight middle-class, monolingual (English) parent-child dyads. Parents worked full time jobs and the children were enrolled in full-time daycare. Four 20-minute conversational samples were audio and video recorded in the subjects' homes (within a two-week period of time) during freeplay activities of the subjects' choice.

Three major results will be reported: (a) availability of feedback, (b) relationship of parental response types to well-formed vs. ill-formed child utterances, and (c) pattern of parental responses.

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Elisabetta DeZuani, M. Chiara Levorato, Istituto di Psicologia, Verona

Children's Comprehension of Narrative and Descriptive Passages: The Role of Structural and Semantic Organization

This paper reports two experiments in which the comprehension processes applied to stories and descriptions are compared.

In the past this problem has been studied with reference to various aspects which differentiate stories from descriptive passages: the surface form, the depth structure, the topical organization.

The purpose of this research is to investigate the role of these aspects in children's comprehension of stories and descriptive passages.

In experiment 1, 60 first graders and 75 third graders listened to one of three versions of the same story: a) canonical; b) procedure in Graesser's sense; c) description in Thorndyke's sense. The first and third graders recalled the same proportion of propositions from the three texts, though the older children recalled more than the younger. These findings suggest that all texts activate a schematic knowledge since they have a plot structure.

In experiment 2, 40 first graders and 45 third graders each heard two texts: a procedure in Graesser's sense and a description in Goelman's sense. The procedure was remembered better than the description by both grade levels. This experiment suggests that a text with a problem-solving structure is more comprehensible because it activates schematic knowledge.

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Ann R. Eisenberg, The University of Texas, San Antonio

Acquisition of Language by a Poor Articulator

The paper compares the acquisition of language by a child with articulation difficulties to that of a more intelligible child. The speech of subjects, who were Spanish-speaking, was recorded at 3-weekly intervals from age 2;0 to 3;2. Poor articulation was found to have an impact on language development at all linguistic levels -- phonological, morphological, syntactic, and conversational. These individual differences were more extensive and significantly different than those previously described in the literature on individual differences in language acquisition. The paper describes these differences and discusses whether their existence poses a threat to current notions about language development. It argues that being a poor articulator can, in fact, alter the typical pattern of language development and that by eliminating from the data base children who are difficult to understand we have inadvertently skewed the picture of language development to one that reflects more similarity across children than actually exists.

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Naomi S. Goodz, Marie-Claire Legare, Lynda Bilodeau and Nira Arbel, Dawson College

Linguistic Awareness in Bilingual and Monolingual Preschoolers

According to most definitions, code switching involves the ability to integrate two languages within a single sentence while retaining the linguistic integrity of each. The ability to engage in such behaviour appears to reflect a sophisticated awareness of the structures of both systems. Code switching is widely held to be a rich source of information about the underlying systems of language. However, little research attention has been given to the emergence of this ability in young bilingual children, perhaps because of a tendency to view L1 and L2 combinations in children's early productions as the result of linguistic confusion. The goal of the present research was therefore to explore code switching in young bilinguals. It was hoped that information about factors influencing code switching in such children would shed light on an issue of central concern in research on simultaneous bilingual language acquisition: namely, whether early language mixing is an indication that the young bilingual considers the two languages to be part of one system or whether she is aware of the presence of two separate systems.

To examine this question, bilingual and monolingual nursery school children from three to six years of age were presented with pairs of linguistically mixed and unmixed sentences. Bilingual children performed significantly above chance level in judging unmixed sentences to be preferable to mixed ones. In keeping with naturalistic evidence and pilot work indicating that nouns are more frequent and acceptable borrowed items than other grammatical categories it was found that in older children, more errors were elicited when L2 nouns were guests in L1 sentences than when the guest words were adjectives. Future work will focus on a wider variety of syntactic and morphological structures and on the code switching boundaries which children preserve.

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Amye Warren Leubecker and Carol S. Tate, University of Tennessee, Chattanooga

Is Preschoolers' Speech "Egocentric"? Evidence of Pragmatic Errors and Routines in Telephone Conversations

Previous research from the referential communication and sociolinguistic paradigms has yielded contradictory results concerning the egocentric nature of preschoolers' speech. The present study combined these two disparate approaches by using a naturalistic setting which also limits the referential context by restricting visual contact between speakers, namely telephone conversation. Sixteen preschoolers were recorded in both face to face interactions and telephone conversations with familiar adults. Results revealed that children were more likely to use deixis during face to face interactions than telephone conversation, but were equally likely to use gestures in both conditions. Older children made less pragmatic errors in general than younger children, but even the oldest children made several "egocentric" errors during telephone conversations. Older children were more sophisticated in telephone routines, especially in ability to negotiate the closing of conversations. The results indicate that preschoolers have limited abilities to adapt their messages to fit the demands of various contexts.

* * * * *

M. Chiara Levorato, University of Verona, and Cristina Cacciari, University of Bologna

How Children Comprehend Idioms in Discourse

In developmental research, idioms comprehension has received little attention (Lodge & Leach, 1975; Ackerman, 1983; Prinz, 1983). Children younger than 9/10 years hardly understand them. In our hypothesis the semantic representation of a story, facilitating the integration of the idiom's meaning within the whole coherent meaning of the story, can promote idiom's comprehension. Subjects (20 1st grade, 20 4th grade and 20 of both grades as control group) were submitted to a recognition task: they were read a story (i.e. a neutral context or a biasing toward idiomatic one) with the idiom at the beginning or at the end. Children have to choose one answer between three: a. connected to idiom's literal meaning, b. to idiomatic meaning c. to the context but neither to a. nor to b. . Control group did the same without the idiom's embedding story. Results confirm our hypothesis: idiomatic explanations increase with age; experimental group performs significantly better than control group.

* * * * *

Diana Masny, College de Rosemont

Reading, Writing and Linguistic Awareness in L2

This presentation examines the relationship among reading, writing and linguistic awareness. Increasingly, questions are being raised pertaining to the process of learning writing from reading. Obtaining knowledge of writing through reading can be said to require some directing of attention that perhaps is distinct from that required for ordinary reading comprehension. Recently, it was found that in English (L1), language awareness, in addition to reading comprehension, was significantly related to high school students' rated writing ability.

The present second language study, in a similar manner, investigated the relationship of linguistic awareness, reading and writing, and the effect of linguistic awareness on the reading-writing relationship. Subjects were French-speaking college students studying ESL in intermediate-advanced classes. The following variables were examined: reading competence, writing ability, and linguistic awareness (grammatical acceptability). The results demonstrated that subjects who have high scores on those tasks measuring reading competence and linguistic awareness were also highly rated for their writing ability.

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Keith E. Nelson and Nancy D. Baker, The Pennsylvania State University

Theoretical and Applied Implications of Experimentally-Induced Advances in Children's Language

In this paper we will review experimental studies of both clinic samples of children and non-clinic samples of children in which induced advances in children's language have been documented. The studies selected for review will all include appropriate baseline measures, clear descriptions of the experimental procedures, and differentiated outcome measures.

These studies indicate that children are often cognitively and linguistically prepared to process and learn from input examples that provide considerable challenge to their current level of language, but that plateaus in development occur because children are waiting for appropriate examples in appropriate context. Triggering of new analyses and new structural descriptions depends upon the child encountering, in processable contexts, new and challenging input examples that enter comparison with prior examples and prior structural descriptions accessed from long-term memory. Further implications for theory and education are also discussed.

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Elizabeth F. Pemberton and Ruth V. Watkins, The University of Kansas

Language Facilitation: Reading and Recasting Revisited

An experimental study was undertaken to examine the effects of reading specially designed stories to preschool children. The subjects were 20 3- to 4-year-old Headstart children from a Midwestern university town. Ten of these children (five 3- and five 4-year-olds) were read a story which incorporated recasts into its 20-page text. The remaining 10 children (five 3- and five 4-year-olds) were read a story similar in every aspect to the recast story (length, pictures, vocabulary, and syntactical complexity) except that this story had no recasts in it. This story modeled to children the syntax and vocabulary items which were recasted in the original story. Recasting is a technique whereby one sentence is immediately followed by another sentence which reiterates the meaning of the first, but changes one or more of its syntactical components. Previous research has shown that recasts can facilitate young children's language development (Baker & Nelson, 1984; Nelson, 1977; Nelson, Bonvillian, & Carskaddon, 1973; Nelson, Bonvillian, Denninger, Kaplan & Baker, 1984), even when embedded into stories (Baker, Permerton, & Nelson, 1985). Modeling is different from recasting in that there is no paired presentation of sentences. It also can be effective in presenting new syntactical information to children (Baker, 1982). The hypothesis that group readings of both types of stories would facilitate lexical growth was supported. The prediction that recasting would facilitate syntactical growth whereas modeling would not was also tentatively supported. However, the syntactical gains made by the recast group were not significantly greater than the gains made by the modeling group. Educational and clinical applications are suggested from these data. Diverse groups of daycare children, including those who are language-delayed, will likely benefit from hearing group reading or stories incorporating new linguistic forms in either a recasting or modeling format.

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Leslie Rescorla, Bryn Mawr College

Pretend Play in 2-Year-Olds with Expressive Language Delay

10 middle class 24-30 month old boys with specific expressive language delay and a comparison group of normal boys were the subjects of this research. Language-delayed subjects manifested significant expressive language delays, but normal nonverbal ability and age-adequate receptive language. Videotaped play data suggested that these young SELD boys had deficits in pretend play skills. They showed minimal levels of pretend play using toys such as trucks, dolls, animals, and utensils -- although they often showed good attention for non-thematic manipulative activities (e.g. shape sorters or colored cubes). We suggest that the expressive language and thematic play deficits seen in these SELD children may reflect a general deficiency in socially mediated learning. The children seemed to lack a rich appreciation for the social communicative and symbolic value of words and representational toys.

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J.A. Rondal, J.P. Thibaut, S. Bredart and A.M. Kaens, University of Liege, Belgium

Pragmatical, Semantical and Morpho-syntactical Factors in the Developmnet of Passives

Two consecutive experiments in the comprehension of passive sentences with action and experiential verbs were carried out in Belgium with French-speaking children aged 4 to 9 year. Several hundreds of children (boys and girls) were requested to act out on playmobil toys and people active and passive sentences differing with respect to several pragmatical, semantical and morpho-syntactical factors. The paper summarizes the data obtained and the theoretical interpretation offered. Together with previous work in the specialized literature these data make it possible to suggest and to document a theoretical model of the development of the comprehension of passive sentences revolving around the notion of a gradual integration of distinct and originally separated pieces of relevant information on linguistic passivity.

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INDEX OF CONFERENCE SPEAKERS

Eisenberg, Ann R.: Sunday, 11:00, Interaction; Poster session
Falco, Francine L.: Poster session
Farran, Dale: Saturday, 4:00, Language Behavior in Specific Populations
Farrar, M. Jeffrey: Saturday, 3:30, First Language Acquisition II

Feagans, Lynne: Saturday, 4:00, Language Behavior in Specific Populations
Fields, Elaine: Saturday, 4:00, Language Behavior in Specific Populations
Finer, Daniel: Friday, 4:00, Modularity
Fischel, Janet E.: Poster session
Fodor, Janet Dean: Saturday, 9:00, Theoretical Approaches to Language Acquisition; Saturday, 10:00, First Language Acquisition I
Fowler, Anne: Sunday, 1:30, Theoretical Issues in the Acquisition of Grammar
Gaustad, Martha Gonter: Friday, 2:00, American Sign Language
George, Barbara L.: Sunday, 10:30, Interaction
Gleitman, Lila: Sunday, Theoretical Issues in the Acquisition of Grammar
Goldin-Meadow, Susan: Sunday, 10:30, Theoretical Issues in the Acquisition of Grammar
Golinkoff, Roberta M.: Saturday, 3:30, Negative Evidence
Goodz, Naomi: Poster session
Gordon, Peter: Saturday, 11:00, First Language Acquisition I
Gorrell, Paul: Saturday, 10:00, First Language Acquisition I
Grimshaw, Jane: Saturday, 2:00, Negative Evidence
Gropen, Jess: Saturday, 9:30, Theoretical Approaches to Language Acquisition
Hirsh-Pasek, Kathy: Saturday, 3:30, Negative Evidence
Hyams, Nina: Saturday, 10:00, Theoretical Approaches to Language Acquisition
Jakubowicz, Celia: Saturday, 10:30, Theoretical Approaches to Language Acquisition
Johnson, Janice: Sunday, 3:00, Second Language Acquisition
Kaens, A.M.: Poster session
Klima, Edward S.: Friday, 3:00, American Sign Language
Kluwin, Thomas N.: Friday, 2:00, American Sign Language
Koster, Charlotte: Friday, 2:30, Modularity
Koster, Jan: Friday, 2:30, Modularity
Landau, Barbara: Sunday, 11:30, Theoretical Issues in the Acquisition of Grammar
Lebeaux, David: Friday, 3:00, Modularity
Legare, Marie-Claire: Poster session
Lehnert, Wendy: Saturday, 9:00, Story Comprehension and Production
Leonard, Jeanette S.: Saturday, 2:30, Language Behavior in Specific Populations
Leonard, Laurence B.: Saturday, 2:30, Language Behavior in Specific Populations

Leubecker, Amye Warren: Poster session
Levorato, M.C.: Poster session
Levorato, M. Chiara: Poster session
Lillo-Martin, Diane: Friday, 3:00, American Sign Language
Mahecha, Nancy R.: Sunday, 2:00, Second Language Acquisition
Maratsos, Michael: Saturday, 3:00, Negative Evidence
Masny, Diana: Poster session
McNally, Louise: Saturday, 3:30, Negative Evidence
Mylander, Carolyn: Sunday, 10:30, Theoretical Issues in the Acquisition of Grammar
Naigles, Letitia G.: Saturday, 11:30, First Language Acquisition I
Nelson, Keith: Poster session
Newport, Elissa: Sunday, 2:00, Theoretical Issues in the Acquisition of Grammar
Novoa, Loriana M.: Sunday, 3:30, Second Language Acquisition
O'Grady, Lucinda: Friday, 3:00, American Sign Language
Okuda, Sachiko: Sunday, 2:30, Second Language Acquisition
Olson, David R.: Sunday, 1:30, Symposium on Literacy
Otsu, Yukio: Friday, 2:00, Modularity
Pemberton, Elizabeth F.: Poster session
Pesetsky, David: Friday, 3:30, Modularity
Peters, Ann: Sunday, 2:30, Theoretical Issues in the Acquisition of Grammar
Pinker, Steven: Saturday, 9:30, Theoretical Approaches to Language Acquisition; Saturday, 10:30, First Language Acquisition I; Saturday, 2:00, Negative Evidence
Pizzuto, Elena: Saturday, 9:00, First Language Acquisition I
Ratner, Nan Bernstein: Saturday, 3:00, Language Behavior in Specific Populations
Reiser, Brian: Saturday, 9:30, Story Comprehension and Production
Rescorla, Leslie: Sunday, 2:30, Second Language Acquisition; Poster session
Roeper, Thomas: Friday, 4:30, Modularity
Rondal, J.A.: Poster session
Sabbadini, Letizia: Saturday, 2:30, Language Behavior in Specific Populations
Schick, Brenda S.: Friday, 4:00, American Sign Language
Segal, Denise E.: Saturday, 2:00, First Language Acquisition II
Sherman, Janet Cohen: Saturday, 10:30, Theoretical Approaches to Language Acquisition
Simon, Julie: Sunday, 11:30, Interaction
Snow, Catherine: Sunday, 10:00, Symposium on Literacy
Stein, Nancy L.: Saturday, 10:00, Story Comprehension and Production
Street, Brian V.: Sunday, 11:30, Symposium on Literacy
Streim, Nancy W.: Saturday, 3:00, First Language Acquisition II
Stromswold, Karin: Saturday, 10:30,First Language Acquisition I

Taeschner, Traute: Friday, 3:30, American Sign Language
Tager-Flusberg, Helen: Sunday, 11:00, Theoretical Issues in the Acquisition of Grammar
Tate, Carol S.: Poster session
Thibaut, J.P.: Poster session
Trabasso, Thomas: Saturday, 10:30, Story Comprehension and Production
Vaid, Jyotsna: Friday, 3:00, American Sign Language
Valian, Virginia: Saturday, 2:30, Negative Evidence
Van Houten, Lori J.: Sunday, 10:00, Interaction
Volterra, Virginia: Friday, 3:30, American Sign Language; Saturday, 2:30, Language Behavior in Specific Populations
Watkins, Ruth V.: Poster session
Wexler, Kenneth: Saturday, 4:00, Negative Evidence
White, Lydia: Sunday, 1:30, Second Language Acquisition
Whitehurst, Grover J.: Poster session
Wilkes, Elizabeth M.: Friday, 2:30, American Sign Language
Zinsser, Caroline: Sunday, 10:30, Symposium on Literacy

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