

*The 12th Annual*  
**Boston University**

**Conference on  
Language  
Development**



**October 23rd, 24th, 25th, 1987**



Boston University  
School of Education

**The Twelfth Annual  
Boston University  
Conference  
on Language Development**

October 23, 24, and 25, 1987

Organized by the graduate students  
in the  
Language Behavior Program



## TABLE OF CONTENTS

Welcome . . . . .	3
Acknowledgement of Review Committees . . . . .	4
General Information . . . . .	5
Summary of Conference Schedule . . . . .	7
Conference Program . . . . .	8
Abstracts	
Literacy in Theory and Practice . . . . .	15
Precursors to Language . . . . .	24
Theoretical Approaches to Language Acquisition . . . . .	34
Posters . . . . .	46
Index of Conference Speakers . . . . .	50
Directory of First Authors . . . . .	52
Directory of Exhibitors . . . . .	56

## WELCOME

Welcome to the Twelfth Annual Boston University Conference on Language Development. Regulars at this Conference will notice some changes this year. For the first time, the Conference Committee has selected three broad areas of language development as themes: Literacy in Theory and Practice, Theoretical Approaches to Language Acquisition, and Precursors to Language. Those who are interested in such topics as second language acquisition, story comprehension, and interaction will find talks relating to these areas within the three thematic strands. In the future, other areas will be selected as themes.

Another new feature is the special all-day workshop on Language Disorders which is being conducted on Friday. This Workshop, designed with classroom practitioners in mind, offers Continuing Education Units.

Although many may be unaware of this, the Conference on Language Development is not based in an organization; it is sponsored by the School of Education and it is produced entirely by the graduate students in the joint School of Education-Graduate School Program in Language Behavior. We would like to take this opportunity to express our appreciation to Dean Paul Warren of the School of Education. His unwavering support of the Conference has been an important factor in its success.

We also wish to thank the faculty members of the Language Behavior Program, and especially the chair, Paula Menyuk, for their encouragement. And special heartfelt thanks are directed (again) to the Conference advisor, Jim Gee, chair of the Department of Developmental Studies and Counseling, School of Education.

We have enjoyed the year of planning that has gone into making this Conference, and we are happy to welcome you. Have a wonderful time!

The 1987 Conference Committee  
Bea Mikulecky, Chair  
Steve Griffin  
Magda Gubala-Ryzak  
Sharon Heiman  
Donna Lardiere  
Marnie Reed Murphy  
Paula Tapia

ACKNOWLEDGEMENT OF REVIEW COMMITTEES

The Conference Committee wishes to thank the following people for their aid in the selection of this year's papers.

Mary E. Curtis, Harvard University  
James Paul Gee, Boston University  
Jane Grimshaw, Brandeis University  
Paula Menyuk, Boston University  
Beatrice Mikulecky, Boston University  
Thomas Roeper, University of Massachusetts/Amherst  
Jacqueline Sachs, University of Connecticut  
Judy Schickedanz, Boston University  
John Trimbur, Worcester Polytechnic Institute  
Kenneth Wexler, University of California/Irvine

\*\*\*\*\*  
NEW ENGLAND CHILD LANGUAGE ASSOCIATION  
Invites You to Sign Up for 1987-1988  
at the  
Table in the Registration Area  
\*\*\*\*\*

## GENERAL INFORMATION

Registration Registration will be held on Friday, October 23, from 11:30 a.m. to 5:00 p.m. in the lobby of the School of Education, and from 6:00 p.m. to 8:30 p.m. in the Metcalf Science Center Lobby. Saturday, October 24, beginning at 8:00 a.m. and Sunday, October 25, beginning at 9:00, registration will take place in the Metcalf Science Center Lobby.

Locations On Friday, the all-day Language Disorders Workshop will meet in the Conference Auditorium  
George Sherman Union  
775 Commonwealth Ave.

All other daytime Friday sessions will be held at the School of Education  
605 Commonwealth Ave.

The Friday evening Keynote Address and Reception will be held at Metcalf Science Center  
590 Commonwealth Ave.

All Saturday and Sunday sessions will also be held at the Metcalf Science Center.  
590 Commonwealth Ave.

Keynote Address Professor Susan Ervin-Tripp, University of California, Berkeley, will deliver the Keynote Address at 8:30 p.m. on Friday in the Metcalf Science Center Auditorium.

Reception Immediately following the Keynote Address, you are cordially invited to a Wine and Cheese Reception in the adjacent Lounge.

Publishers' Exhibits Exhibits of books and other publications will be located on the ground floor of the Metcalf Science Center all day Saturday and Sunday. A list of exhibitors may be found at the back of this Handbook.

Poster Sessions The poster sessions will be located in Room 111 of the Metcalf Science Center. They will be open all day Saturday and Sunday.

Coffee Coffee, decaf, and tea will be served for most of Saturday and Sunday. Also on Sunday, bagels and cream cheese will be available at 9:00 a.m. These refreshments may be found on the ground floor of the Metcalf Science Center.

Sign Language Interpreters 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 at the registration desk on Saturday and Sunday. We cannot replace lost Handbooks free of charge. A limited number of Handbooks from past years are also available for purchase at \$3.00 each.

Message Board You may leave messages on the board located near the registration desk in the Metcalf Science Center.

Badges Please be sure to wear your badge at all times 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.

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COLLECTION AND AVAILABILITY OF PAPERS

The Eric Clearinghouse on Elementary and Early Childhood Education is collecting the papers from the Conference on Language Development for possible dissemination in ERIC, a federally funded educational resources information system.

Presenters: Please send two copies of your paper to:

Acquisitions Coordinator  
ERIC/EECE  
University of Illinois  
805 W. Pennsylvania Ave.  
Urbana, IL 61801

Papers accepted as ERIC documents will be available on microfiche within four to eight months in ERIC microfiche collections in libraries. Document citations and abstracts are computer searchable through most database vendors.

If you have any questions, please write to ERIC/EECE at the above address or call (217) 333-1386.

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SUMMARY OF CONFERENCE SCHEDULE

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

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Friday  
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GSU 8:45 am- All-day workshop on Language Disorders  
5:15 pm Conference Auditorium, Second Floor

SED 11:30 am Registration begins, Lobby  
1:00 pm Theoretical Approaches to Language  
Acquisition, Auditorium (Room 130)  
2:00 pm Literacy in Theory and Practice  
Room 140

MSC 8:00 pm Keynote Address, Auditorium  
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Saturday  
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MSC Starting Literacy in Theory and Practice  
at Room 115  
9:00 am Precursors of Language  
Lounge  
Theoretical Approaches to Language  
Acquisition, Auditorium  
Poster sessions, Room 111  
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Sunday  
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MSC Starting Literacy in Theory and Practice  
at Room 115  
10:00 am Precursors of Language  
Lounge  
Theoretical Approaches to Language  
Acquisition, Auditorium  
Poster sessions, Room 111

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MSC Publishers' Exhibits, Saturday (9-5) and  
Sunday (10-5), Ground Floor Dining Area  
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CONFERENCE PROGRAM

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KEYNOTE ADDRESS

Friday Evening

Metcalf Science Center- Auditorium

8:00 PROFESSOR SUSAN ERVIN-TRIPP, UNIVERSITY OF CALIFORNIA/BERKELEY  
"Speech Acts and Syntactic Development: Independent or Linked?"

Wine and Cheese Reception

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LITERACY IN THEORY AND PRACTICE

Friday Afternoon

2:00- VIVIAN ZAMEL, ELEANOR KUTZ, SUZIE GRODEN, CANDACE MITCHELL, UNIVERSITY  
5:00 OF MASSACHUSETTS-BOSTON  
"Students as Ethnographers: Investigating Language Use as a Way to  
Learn to Use the Language"

Saturday Morning

9:00 THOMAS NEWKIRK, UNIVERSITY OF NEW HAMPSHIRE  
"More than Stories: The Repertoire of Young Writers"

9:45 JUDITH A. HUDSON AND MARYBETH HAGREEN, STATE UNIVERSITY OF NEW YORK/  
ALBANY  
"From Script to Story: The Development of Narrative Skill"

10:30 DENNIS P. WOLF AND DEBORAH A. HICKS, GRADUATE SCHOOL OF EDUCATION,  
HARVARD UNIVERSITY  
"Voices in Early Play Narratives: A Foundation for Genre Skills"

11:15 MYRIAM SCHECTER AND SANDRA R. SCHECTER, ONTARIO INSTITUTE FOR STUDIES  
IN EDUCATION  
"Children's Acquisition of Literary Genre: Science Fiction Versus  
Fantasy"

12:00 Discussant: MARY E. CURTIS, GRADUATE SCHOOL OF EDUCATION, HARVARD  
UNIVERSITY

### Saturday Afternoon

- 2:00 **BRIAN V. STREET**, UNIVERSITY OF SUSSEX, ENGLAND  
"Comparative Perspectives in Literacy Research: Cross-Cultural, Academic/Practitioner, Adult/School"
- 2:45 **ADELE MACGOWAN**, CITY COLLEGE OF NEW YORK  
"Interactions and Transactions during Literacy Development in a Bilingual First Grade: An Ethnographic Study"
- 3:30 **NIKO BESNIER**, UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN  
"Nukulaelae Letters as Affect Displays"
- 4:15 **SUSAN LYTLE**, UNIVERSITY OF PENNSYLVANIA  
"Collaborative Research in Adult Literacy: Issues in Alternative Assessment"
- 5:15 **BRIAN V. STREET**, UNIVERSITY OF SUSSEX, ENGLAND  
"Closing Remarks"

### Sunday Morning

- 10:00 **FREDERICK ERICKSON**, UNIVERSITY OF PENNSYLVANIA  
"Literacy Practices and Classroom Practices"
- 10:45 **COURTNEY CAZDEN**, GRADUATE SCHOOL OF EDUCATION, HARVARD UNIVERSITY  
"The Dangerous Myths of Decontextualization and Autonomous Texts"
- 11:30 **ADRIAN T. BENNETT**, THE LEXINGTON CENTER, INC., NEW YORK  
"Literacy Policy and Research: From the Oppressive to the Irrelevant to the Almost Useful"
- 12:30 Discussant: **JOHN TRIMBUR**, WORCESTER POLYTECHNIC INSTITUTE

### Sunday Afternoon

- 2:00 **CATHERINE E. SNOW**, GRADUATE SCHOOL OF EDUCATION, HARVARD UNIVERSITY  
"Oral Language Skills that Predict Literacy Achievement"
- 2:45 **PATRICIA VELASCO**, GRADUATE SCHOOL OF EDUCATION, HARVARD UNIVERSITY  
"The Relationship Between Decontextualized Language and Reading Comprehension in Bilingual Children"
- 3:15 **DANIEL A. WAGNER**, UNIVERSITY OF PENNSYLVANIA  
"Does Learning to Read in a Second Language Always Put the Child at a Disadvantage? Some Counter-Evidence from Morocco"
- 4:00 **SARAH MICHAELS**, EDUCATION DEVELOPMENT CENTER, INC.  
"Discourse, Ideology, and Appropriation: What We Learn About Learning to Write by Studying Teacher Talk and Student Texts"
- 4:45 Discussant: **JAMES PAUL GEE**, BOSTON UNIVERSITY

## PRECURSORS TO LANGUAGE

### Saturday morning

- 9:00 **LOIS BLOOM**, TEACHERS COLLEGE, COLUMBIA UNIVERSITY  
"Developments in Expression: Words and Affect"
- 10:00 **PRISCILLA ROTH**, GRADUATE SCHOOL OF EDUCATION, HARVARD UNIVERSITY  
"Temporal Characteristics of Maternal Verbal Style and Child Language Development"
- 10:30 **PAUL YODER AND ANN KAISER**, VANDERBILT UNIVERSITY  
"Exploring the Indirect Routes by Which Maternal Speech Predicts Later Child Language Development"
- 11:00 **RICHARD BECKWITH**, TEACHERS COLLEGE, COLUMBIA UNIVERSITY  
"Conceptual-Semantic Categories for Processing Input"
- 11:30 **ALISON GOPNIK**, UNIVERSITY OF TORONTO AND **SOONJA CHOI**, SAN DIEGO STATE UNIVERSITY  
"A Cross-Linguistic Study of Early Semantic and Cognitive Development"

### Saturday afternoon

- 2:00 **JOHN DORE**, GRADUATE CENTER, CITY UNIVERSITY OF NEW YORK  
"An Analysis of Crib Monologues from 22 Months to Three Years"
- 3:00 **NANCY SOJA**, NORTHEASTERN UNIVERSITY  
"Constraints on Early Word Meanings: Semantic or Conceptual?"
- 3:30 **MICHAEL SMITH**, WESTERN CAROLINA STATE UNIVERSITY  
"Preacquisition Lexical Use Patterns"
- 4:00 **FERNANDE CHARRON AND LAURA PETITTO**, MCGILL UNIVERSITY  
"Semantic Categories in the Acquisition of Langue des Signes Quebecoise (LSQ) and American Sign Language (ASL)"
- 4:30 **ROBERTA GOLINKOFF**, UNIVERSITY OF DELAWARE AND **KATHY HIRSH-PASEK**, TEMPLE UNIVERSITY  
"A New Picture of Language Development: Evidence from Comprehension"
- 5:00 **KATHY HIRSH-PASEK**, TEMPLE UNIVERSITY AND **ROBERTA GOLINKOFF**, UNIVERSITY OF DELAWARE  
"From Evidence to Explanation: Using Comprehension Data to Inform Theories of Language Acquisition"

Sunday morning

- 10:00 **JOHN LOCKE**, MASSACHUSETTS GENERAL HOSPITAL, BOSTON  
"Babbling and Early Speech: Continuity and Individual Differences"
- 11:00 **SHELLY VELLEMAN**, ELMS COLLEGE  
"Mother-Child Interactions: A Longitudinal Microanalysis"
- 11:30 **MARLYS A. MACKEN** AND **CHARLES A. FERGUSON**, STANFORD UNIVERSITY  
"Protowords: Linguistic Structure and Function"
- 12:00 **D. KIMBROUGH OLLER**, UNIVERSITY OF MIAMI  
"Precursors to Speech in Infant Babbling"

Sunday afternoon

- 2:00 **JOANNE MILLER**, NORTHEASTERN UNIVERSITY  
"Speech Perception in Early Infancy"
- 2:30 **MARILYN VIHMAN**, STANFORD UNIVERSITY  
"The Interaction of Perception and Production in the Transition to Speech"
- 3:30 **LISE MENN**, UNIVERSITY OF COLORADO  
"Communicative Function of Intonational Contour in Protolanguage"
- 4:00 **MICHAEL STUDDERT-KENNEDY**, HASKINS LABORATORY  
"Where Do Segments Come From?"

THEORETICAL APPROACHES TO LANGUAGE ACQUISITION

Friday afternoon: ACQUISITION OF BINDING

- 1:00 HELEN CAIRNS AND DANA McDANIEL, QUEENS COLLEGE & GRADUATE CENTER, CITY UNIVERSITY OF NEW YORK  
"The Status of the Binding Principles in the Grammars of Young Children"
- 1:40 DIANA KAUFMAN, TEMPLE UNIVERSITY  
"'Who's him?': Evidence for Principle B in Children's Grammar"
- 2:20 STEPHEN CRAIN AND CECILE McKEE, UNIVERSITY OF CONNECTICUT  
"Cross-Linguistic Analyses of the Acquisition of Coreference Relations"
- 3:00 BREAK
- 3:20 YU-CHIN CHIEN AND KENNETH WEXLER, UNIVERSITY OF CALIFORNIA-IRVINE  
"A Comparison between Chinese-Speaking and English-Speaking Children's Acquisition of Reflexives and Pronouns"
- 4:00 HYEONJIN LEE AND KENNETH WEXLER, UNIVERSITY OF CALIFORNIA-IRVINE  
"The Acquisition of Reflexives and Pronouns in Korean"
- 4:40 BARBARA LUST AND GITA MARTOHRDJONO, CORNELL UNIVERSITY  
"On the Contribution of the Binding Theory Module to a Theory of the Acquisition of Anaphora"

SATURDAY: PARAMETERS, MATURATION, AND CROSSLINGUISTIC PHENOMENA IN LANGUAGE ACQUISITION

Saturday Morning

- 9:00 NINA HYAMS, UNIVERSITY OF CALIFORNIA-LOS ANGELES  
"The Initial State and the Theory of Markedness"
- 9:45 DIANE LILLO-MARTIN, UNIVERSITY OF CONNECTICUT  
"Parameters in the Acquisition of American Sign Language"
- 10:30 AMY PIERCE, MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
"Null Subjects in the Acquisition of French"
- 11:15 PAUL BLOOM, MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
"Parameter Theory and the Acquisition of Word Order"

Saturday Afternoon

- 2:00 KATHERINE DEMUTH, BOSTON UNIVERSITY  
"Acquisition of Impersonal Passive: A Matter of Case"
- 2:45 STEPHEN CRAIN, ROSALIND THORNTON, KEIKO MURASUGI, UNIVERSITY OF CONNECTICUT  
"Capturing the Evasive Passive"

THEORETICAL APPROACHES TO LANGUAGE ACQUISITION, Saturday Afternoon continued-

- 3:30 **JACQUELINE JOHNSON AND ELISSA NEWPORT**, UNIVERSITY OF ILLINOIS  
"Critical Period Effects in Second Language Learning: The Influence of  
Maturational State on the Acquisition of Universal and Specific  
Aspects of English"
- 4:15 **KENNETH WEXLER**, UNIVERSITY OF CALIFORNIA-IRVINE  
"Maturation, Continuity, Parameters and Re-Organization in Language  
Acquisition"
- 5:00 Discussant: **SUSAN CAREY**, MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SUNDAY: ACQUISITION OF VERBS AND ARGUMENT STRUCTURE

Sunday Morning

- 10:00 **STEVEN PINKER**, MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
"A Theory of the Organization and Acquisition of Argument Structure"
- 10:45 **MELISSA BOWERMAN**, MAX PLANCK INSTITUTE FOR PSYCHOLINGUISTICS  
"Mapping Thematic Roles onto Syntactic Functions: Are Children Helped  
by Innate "Linking Rules"?"
- 11:30 **THOMAS ROEPER**, UNIVERSITY OF MASSACHUSETTS-AMHERST  
"The Argument Structure Hypothesis: The Acquisition of Argument  
Structure Precedes the Acquisition of Thematic Roles"
- 12:15 **W. NEIL ELLIOTT**, UNIVERSITY OF CALIFORNIA-IRVINE  
"On Acquiring the Category Verb"

Sunday Afternoon:

- 2:00 **JESS GROPEN, STEVEN PINKER, AND RICHARD GOLDBERG**, MASSACHUSETTS  
INSTITUTE OF TECHNOLOGY  
"Constrained Productivity in the Acquisition of Locative Forms"
- 2:45 **LILA GLEITMAN**, UNIVERSITY OF PENNSYLVANIA  
"The Acquisition of Verbs by Syntactic Bootstrapping"
- 3:30 **LETITIA NAIGLES**, UNIVERSITY OF PENNSYLVANIA; **KATHY HIRSH-PASEK**, TEMPLE  
UNIVERSITY; **ROBERTA GOLINKOFF**, UNIVERSITY OF DELAWARE; **LILA GLEITMAN**  
AND **HENRY GLEITMAN**, UNIVERSITY OF PENNSYLVANIA  
"From Linguistic Form to Meaning: Evidence for Syntactic Bootstrapping  
by Two-Year Olds"
- 4:15 Discussant: **JANE GRIMSHAW**, BRANDEIS UNIVERSITY

POSTER SESSIONS

Saturday and Sunday, All Day

**MARJORIE BEEGHLY, HARVARD MEDICAL SCHOOL, AND DANTE CICCHETTI, UNIVERSITY OF ROCHESTER**  
"Mommy mad?": Emergence of an Internal State Lexicon in Low SES Maltreated and Nonmaltreated Toddlers"

**BEVERLY GOLDFIELD, HARVARD UNIVERSITY, MARJORIE BEEGHLY, HARVARD MEDICAL SCHOOL, DENNIS WOLF, HARVARD UNIVERSITY**  
"Form and Function in Narrative and Character Speech Within a Replica Play Task"

**HENRIETTA LEMPERT, UNIVERSITY OF TORONTO**  
"Learning Noun Order in Passives: Effect of Animacy, Givenness, and Salience"

**CAROLYN MERVIS AND KATHY JOHNSON, UNIVERSITY OF MASSACHUSETTS-AMHERST**  
"Acquisition of the Plural Morpheme: A Case Study"

**EVANGELINE NWOKAH AND ALAN FOGEL, PURDUE UNIVERSITY**  
"Cross-cultural Differences in Baby-Talk to Infants- The Missing Links?"

**MICHAEL TOMASELLO, SARA MANNLE, AND LAURI WERDENSCHLAG, EMORY UNIVERSITY**  
"The Effect of Known Words on the Child's Acquisition of New Words"

## LITERACY IN THEORY AND PRACTICE

### Friday Afternoon

Vivian Zamel, Eleanor Kutz, Suzie Groden, Candace Mitchell  
University of Massachusetts/Boston

#### Students as Ethnographers: Investigating Language Use as a Way to Learn to Use the Language

For several years, Shirley Brice Heath has been experimenting with an approach which, from the outset, makes direct use of students' competence as language users, making them conscious of the functions of language, of its power as a medium for relationships, and of the significance of context for any understanding of human behavior. As an ethnographer of language use, Heath has not only described the nature and function of literacy in diverse communities, but has taught students to do the same--to become ethnographers of their own language communities.

Heath's work, however, has focused primarily on young children in their early years of acquiring school literacy. At the University of Massachusetts we have developed, with her, a project which extends this approach to the teaching of writing to urban university students of diverse, generally disadvantaged backgrounds. We have taught these students to use ethnographic methods, to observe their own and their communities' language use, and to become active researchers who report on their findings. Such a pedagogy creates an environment for the meaningful study of language. As students learn to talk and write about the functions of language in metalinguistic terms (which they acquire as they need them), their underlying linguistic competence and their ability to identify and use the language of the academic community develop as well.

\* \* \* \* \*

### Saturday Morning

Thomas Newkirk, University of New Hampshire

#### More Than Stories: The Repertoire of Young Writers

It is commonly assumed that children begin to write by writing stories. A large body of research supports the view that children understand the "grammar" of the story. There has been very little work on children's writing that is not narrative, and some developmental theories suggest that expository writing is beyond the capability of young children. In this session I will demonstrate the range of non-narrative discourse forms that young children attempt, focusing particularly on letters, lists, and signs. I will contend that just as children show the rudiments of the story in their early stories, they also show the rudiments of argument and exposition in their early writing.

Judith A. Hudson and Marybeth Hagreen, State University of New York/Albany

From Script to Story: The Development of Narrative Skill

This study investigated children's production of three types of narratives. Pre-school, first-grade, and third-grade children were asked to produce scripts, personal narratives, or make-believe stories about four events -- going to the doctor's office, going to a birthday party, going on a trip, and celebrating Halloween. Although children produced longer and more abstract narratives with age, narrative complexity varied across genres. Even the youngest children produced complex scripts, their personal narratives were less complex, and both genres developed with age. Only a small percentage of the oldest children produced complex stories, primarily about going on a trip -- the least routine event. These findings indicate that narrative skill develops within particular narrative genres and is affected by children's knowledge about real-world events.

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Dennis P. Wolf and Deborah A. Hicks, Graduate School of Education, Harvard University

Voices in Early Play Narratives: A Foundation for Genre Skills

The study is an analysis of the oral narratives of eight children followed longitudinally between the ages of 3;0 and 7;0. Narratives were obtained in play sessions in which children were given small replica figures and asked to create fantasy stories. The narratives were examined in terms of children's abilities to manipulate three separate voices: a narrative voice in which children assume a more distant stance from the action, a dialogue voice in which children assume the voice of replica play characters in the story, and a stage managing voice in which children act as negotiators of props and settings for the actions. A linguistic analysis of the data suggests that skill in marking different voices in replica play narrative is apparent as early as age three. The developmental findings are discussed as one possible foundation for the acquisition of an understanding of different types of texts, or genres, essential to full literacy.

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Miriam Schechter and Sandra R. Schechter, Ontario Institute for Studies in Education

Children's Acquisition of Literary Genre: Science Fiction Versus Fantasy

This paper discusses Grade 5 children's acquisition of two literary genres--science fiction and fantasy. It focusses on

children's sequential acquisition of constitutive elements of each genre, the relationship between the literature children read and the stories they write, and the evolution of children's notions of genre with cumulative exposure to a genre-based curriculum. The analysis is based on ethnographic observations, transcripts of learners' formal and informal interviews with the teacher and a researcher, and children's writing produced subsequent to their reading within a genre.

Findings indicate that acquisition of stereotyped elements precedes that of general attributes, that the children's reading influence the packaging--rather than the substance--of the stories they write, that children cross boundaries into preferred genres to accommodate writing within a required one, and that exposure to different kinds of literature positively affects children's understanding of the canonical structure of a specific genre.

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#### Saturday Afternoon

Brian V. Street, University of Sussex, England

#### Comparative Perspectives in Literacy Research: Cross-cultural, Academic/Practitioner and Adult/School

1) I intend to consider "comparative" perspectives on research into literacy in 3 senses:

- cross cultural
- academic/practitioner
- adult/school.

2) Cross-cultural:

A. Underlying assumptions and theory

Before embarking on research or on an analysis of other people's research, it is necessary to spell out one's own assumptions. In doing this I also point out what I think is problematic about some sets of theory and assumptions in the field.

I summarise these positions in terms of some refinements of my earlier use of autonomous vs. ideological models. In particular I want to explore the relationship between literacy practices and nationalism, as a basis for then considering the kinds of assumptions currently made in western pedagogy and research about literacy.

I look at some empirical examples of the significance of literacy for such political processes and for fundamental conceptions about the nature and status of knowledge, epistemology etc. (eg. Medieval England; contemporary Mexico; Ethiopia and Somalia).

3) Academic/Practitioner

I consider recent developments towards more practitioner or collaborative research into literacy, as evidence of ideological shifts in assumptions about the nature of both literacy and of research.

#### 4) Adult/School

From within the framework outlined above, I explore how far both schools and adult literacy practitioners have changed in recent years (eg. the National Writing Project in the UK) and the development of links between the sectors (eg. a report on the conference on "Literacy Research in the UK" held in Brighton in June 1987).

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Adele Macgowan, City College of New York

#### Interactions and Transactions during Literacy Development in a Bilingual First Grade: An Ethnographic Study

Research and theory suggest that certain types of classroom interactions and high levels of student transactions combine with other factors - behavioral, environmental, material and motivational - to promote the acquisition and development of literacy in schools. These factors were used as the framework to analyze the findings of an ethnographic investigation of literacy learning activities in a bilingual first grade where phonics and copying were the primary literacy activities until the last third of the school year, when diary writing, process writing on computers, and reading for pleasure also became regularly occurring activities. The study also quantified students' interactions and transactions during literacy activities, and included literacy development data from eight case studies of students of varying levels of ability. The presenter will summarize the findings of the study and offer pedagogical implications.

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Niko Besnier, University of Illinois at Urbana/Champaign

#### Nukulale Letters as Affect Displays

The primary purpose of literacy production on Nukulaelae Atoll (Central Pacific) is to write letters. Nukulaelae letters are sent to relatives on neighboring atolls, and serve a variety of functions: monitoring economic reciprocity; informing kin of family events; and admonishing younger people. Permeating every aspect of letters is a heavy emphasis on the overt expression of affect, of a nature not found in any other arena of Nukulaelae social life. This paper describes the way in which affect is encoded in the text of these letters, through overt markers like emotion terms, deictics, and endearment markers. The linguistic analysis, supplemented by a historical-ethnographic investigation of letter-writing on the atoll, indicates that letters have been defined as cathartic events from the very introduction of literacy. The linguistic and functional aspects of a literacy event can thus be entirely shaped by its social definition.

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Susan L. Lytle, University of Pennsylvania

Collaborative Research in Adult Literacy: Issues in Alternative Assessment

Socio-cultural or literacy-as-practice theories of literacy imply approaches to assessment with adult learners in which literacy is presented as varied and context-dependent, not simply as a set of technical or autonomous skills. The design of alternatives (to tests based on an autonomous model) requires that we radically restructure the content, social dynamic and contexts in which assessment takes place. Using examples from the Adult Literacy Evaluation Project (Philadelphia) and the initial stages of the Alternative Assessment Project (New York City), this paper will explore some of the critical social, psychological and political issues involved in the design and implementation of alternative assessment procedures for research on adult literacy development. Based on these studies, a set of questions for discussion will be posed: questions about the consequences for adult learners, teachers and programs of using assessment which reflects current theory and questions about collaborative research in literacy.

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Sunday Morning

Frederick Erickson, University of Pennsylvania

Literacy Practices and Classroom Practices

Practices are routine (and often unexamined) ways of perceiving, believing, reasoning, and taking action. How a teacher conceives of his or her classroom generally, across the academic and social curriculum, is partly dependent upon routine practices. The general conceptions of a teacher may influence conceptions of a particular subject area, such as literacy. The teacher's classroom practices derive in part from personal philosophy of pedagogy and in part from the practices of school administration and staff development. Thus, educational practices can be seen as cultural framing assumptions in various domains that appear to influence one another across domains. In a school-cultural world of time on task, teacher effectiveness, and school effectiveness, where then is literacy and how is it seen by teachers? The paper addresses these questions by describing and analyzing changes in conceptions of literacy and literacy practices that occurred in recent collaborative work with elementary teachers.

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Courtney Cazden, Graduate School of Education, Harvard University

The Dangerous Myths of Decontextualization and Autonomous Texts

Two related myths divert attention from important instructional tasks.

The myth of decontextualization asserts the existence of a higher-order a-contextual kind of language processing. I will argue that the intrinsically human quest for "meaningfulness" is always met by the mental construction of some context for incoming stimuli. The task for education is not to teach skills for coping with supposedly decontextualized language, but to nourish the construction of students' "contexts in the mind".

The myth of autonomous texts asserts the existence of a higher-order kind of autonomous text called essayist literacy. I will argue, with brief references from the history of writing about science, that outside of school exercises, writing is always contextualized within a living tradition. The task for education is not to teach skills for producing supposedly autonomous texts, but to provide conditions for students to become knowledgeable participants in a community of writers in a particular domain.

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Adrian T. Bennett, The Lexington Center, Inc., New York

Literacy Policy and Research: From the Oppressive to the Irrelevant to the Almost Useful

Far from referring unambiguously to acquired skills, or lack thereof, "literacy" and "illiteracy" are best understood as symbolic constructs which conceal basic contradictions and social struggles in U.S. society. These symbols are drawn on in educational policy debates by various elite sectors to redefine social conflicts as educational problems, and to reduce educational problems to technological ones. Although the discussion ranges more widely in academia than in the media and published reports of government and private foundations, academic research on literacy is largely guided by the demands of these policy debates. The result is that most of both policy debates and academic research is, when not directly harmful, irrelevant to the social conditions and educational needs of large sectors of U.S. society, particularly poverty-ridden, oppressed, inner-city ethnic minorities. This paper examines some of the contradictions and irrelevancies and makes some possibly unpalatable suggestions for overcoming them.

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Sunday Afternoon

Catherine E. Snow, Graduate School of Education, Harvard University

Oral Language Skills that Predict Literacy Achievement

Skills at certain oral language tasks, such as carrying on conversations, show little relation to literacy achievement, whereas skills at other oral language tasks, such as adapting one's talk to the needs of a distant listener, or analyzing one's stored lexical knowledge to provide a good formal definition, do predict literacy achievements. These more "decontextualized" oral language skills are not correlated with conversational skills, and many furthermore show very different patterns of transfer from a first to a second language. Levels of English proficiency in these decontextualized oral skills will be presented for three groups of children: native English speakers, non-native speakers of English in a private English-curriculum school, and non-native speakers of English in a public-school bilingual program. All children are in second through fifth grade. Patterns of relationship between English oral language skills and English reading skills will be presented for each group. It will be argued that predicting literacy achievements requires a differentiated assessment of the components of oral language skill for the language in which the reading is being assessed.

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Patricia Velasco, Harvard University

The Relationship between Decontextualized Oral Language and Reading Comprehension in Bilingual Children

Even though many linguistic features are used to predict reading ability (i.e., vocabulary, metalinguistic awareness) the nature of this relationship is still unsettled. Oral decontextualized language skills are those used for topics of conversation for which there is no shared knowledge between the speaker and the listener. Reading comprehension has been described as the ability to extract and generalize meaning from a text. This study explores the relationship between these two skills to assess the influence that one can have over the other. Furthermore, studying decontextualized language and reading comprehension in bilingual children has the advantage of investigating both skills separately in two languages (Spanish-English) as well as broadening our understanding of the issues of transfer in this population.

Oral decontextualized language was assessed with materials specially created for this purpose. Reading comprehension was analyzed with oral summaries of social science texts. The study focuses on eighty third and fifth graders classified as either poor or good readers from working class backgrounds.

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Daniel A. Wagner, University of Pennsylvania

Does Learning to Read in a Second Language Always Put the Child at a Disadvantage? Some Counter-evidence from Morocco

Over recent decades, researchers have gathered a variety of evidence to support the theory that learning to read in the "mother tongue" or first language of the child leads to enhanced achievement relative to children who are obliged to learn to read in a second language. Evidence collected primarily in Europe and America has been applied by such international organizations as UNESCO to support early mother-tongue education programs in many Third World countries. The data reported in this paper were gathered as part of the Morocco Literacy Project, a longitudinal study of literacy acquisition in Moroccan children. Begun in 1982, the Project has studied a sample of 350 first-grade children and their parents in one urban and one rural fieldsite in Morocco. Children in the sample came from two quite different linguistic communities (Moroccan Arabic and Berber), but live in the same village, attend the same schools, and learn to read in Arabic. The Project also considered the influence of a variety of other variables, such as Quranic preschooling experience, parental literacy, gender, and SES. Analyses showed that there were major differences in reading achievement between linguistic groups during the first and second years of primary school, but, for many Berber children, such differences disappeared by year 3. Quranic preschooling, which takes place in Arabic, was found to be a major mediating influence on achievement. These results are discussed in terms of the context of language use and language prestige in the Moroccan context and in terms of their potential generalizability to other linguistic and cultural contexts.

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Sarah Michaels, Education Development Center, Newton, Mass.

Discourse, Ideology, and Appropriation: What We Learn about Learning to Write by Studying Teacher Talk and Student Texts

We hear a great deal about the political and ideological nature of literacy, but rarely see actual analyses of how such forces play themselves out in learning to write in school. In order to bridge the broadly social and the narrowly linguistic, we need to focus more systematic attention on the interpretive processes by which text is constructed in a social context, what Bakhtin would call "responsive understanding" of text.

This paper is an attempt to lay out a theoretical and methodological approach to the study of writing development as an interpretive process in a fundamentally ideological context. Inherent in school writing activities is an often implicit contradiction -- that written language is an expression of an individual student's "voice", but a voice that is significantly constrained by the narrowly defined community and "school-based"

standards of what counts as literate discourse.

An analysis of writing conferences, where students, teachers, and written texts are brought together, is a strategic site for studying the process of "appropriation" -- whereby students take from teachers ways of making and taking meaning from text. Through a comparative (intertextual) analysis of writing conferences and student texts, in urban classrooms, the paper documents how teachers' goals, expectations, and interpretive judgments are communicated to students, and how they constrain the meaning and language of student texts as well as students' learning. In order to think about how to improve writing instruction, we must better understand how teachers read and respond to student texts, that is, how teachers' ideology of schooling and expectations about "good" writing influence their "responsive understanding" of individual student texts.

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## PRECURSORS TO LANGUAGE

### Saturday Morning

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Lois Bloom, Teachers College, Columbia University

### Developments in Expression: Words and Affect

Children on the threshold of language already have a system of expression available to them. In the period of infancy, before language, the form and content of communication between infants and their caregivers is largely affective. In this presentation I will discuss the results of several studies of affect as a system of expression in the transition from infancy to language. These studies have been grounded in a theory that departs from the commonly held view that language is acquired by children as a tool for achieving goals or for designating objects and events in the world. Rather, children acquire the forms of speech for expressing intentional states of mind and for interpreting the speech of others so as to attribute contents of mind to them. Expression is basic to the theory and our research has been concerned with two of the forms of expression available to the young child: words and affect. Given that affect expression is already in place before speech begins in the second year, we have asked how the expression of affect relates to the emergence of children's expression with words. Our studies report (1) the influence of affect expression on the onset and rate of word acquisition and the emergence of multiword speech; (2) developments in different parameters of affective expression in relation to the onset of speech; (3) the underlying representations attributable to word and affect expressions; and (4) the coordination of the two systems of expression for saying words with affective connotation.

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Priscilla L. Roth, Graduate School of Education, Harvard University

### Temporal Characteristics of Maternal Verbal Style and Child Language Development

My research examines individual differences in maternal verbal style during interaction with preverbal infants. Computer-controlled microbehavioral analysis techniques are used to measure the temporal relationships between maternal speech and infant behavior. A responsive maternal verbal style was found to consist of verbal responses that were temporally contingent on infant

vocalizations and that semantically elaborated the infant's focus of attention or activity. I hypothesized that such temporally contingent verbal information may facilitate the infant's learning of vocabulary, and may teach the infant when and how to use language to articulate his or her own experience. Results of a 2-year longitudinal study of 10 mother-infant dyads support these hypotheses. Mothers who had a responsive verbal style when their infants were 12 months old had infants who at 26 months were more articulate and conversationally competent and at 3 years were more linguistically advanced, as measured by the PPVT-R. That other maternal discourse styles were not associated with the child's language progress suggests that it is not simply the amount of speech directed to the child that is important, but that it is the timing of maternal speech contingent on infant behavior, and the semantic relevance of that contingent speech that may facilitate the child's language development.

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Paul J. Yoder and Ann P. Kaiser, Vanderbilt University

Exploring the Indirect Routes by Which Maternal Speech Predicts Later Child Language Development

The present study analyzed formerly unexamined indirect routes for relationships between time 1 maternal speech and later child language development. Ten stage 1 children and their mothers were the subjects. For each dyad, two free-play sessions occurring 5 months apart were videotaped in the subjects' homes. Mother's pragmatic language use was coded from time 1 sessions. Child language level was coded at both sessions. Even though time 1 scores of the outcome were controlled, seven out of the nine obtained mother speech - child language development relationships were mediated through one of two time 1 child language measures. The results indicate that a mother-driven, direct influence model may be inappropriate for many mother speech - child language development relationships. The authors present logical arguments demonstrating that child-driven and mother-driven models for explaining the indirect relationships are equally feasible.

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Richard T. Beckwith, Teachers College, Columbia University

Conceptual-Semantic Categories for Processing Input

In spite of the fact that learnability arguments make strong assumptions about the child's primary data, the literature lacks careful studies of input with an eye to current thinking about learnability. This language acquisition input study addresses how the child maps input data into output. Most extant models work only with grammatical input and, therefore, require unmotivated preprocessors to filter actual mother-to-child speech. In this study the input, collected from observations of mother-child

interaction, consists of language (morpheme strings) paired with situational representations and does not require preprocessing. The subjects were 10 mother-child dyads who were videotaped in a laboratory playroom once a month from the time the children were 8 months old until they were over 24 months old. The specific tapes analyzed were those that coincided with the child's first word, the child's vocabulary spurt, and the point at which the child's mean length of utterance (MLU) surpassed 1.5 morphemes. The categories used for analysis of the situation are a nonlinguistically motivated subset of Jackendoff's (1983) conceptual-semantic categories. The results of the analysis are sets of sentence frames, which are argued to play the role of canonical sentences.

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Alison Gopnik, University of Toronto, and Soonja Choi, San Diego State University

A Cross-Linguistic Study of Early Semantic and Cognitive Development

The early semantic and cognitive development of 3 Korean-speaking and 3 French-speaking children in the one-word stage was investigated. These children all used some lexical item to express disappearance or success and failure, though these lexical items were rather different from the lexical items used to encode these concepts in English. Moreover, the emergence of these lexical items was closely and specifically related to the emergence of relevant cognitive abilities. Disappearance words emerged contemporaneously with specific object-permanence abilities while success/failure words emerged contemporaneously with means-ends abilities. Moreover, there appeared to be a relation between the emergence of a naming explosion and the development of categorization skills.

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Saturday Afternoon

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John Dore, City University of New York

An Analysis of Crib Monologues from 22 Months to Three Years

I will present the findings from an analysis of a child's crib talk from 22 months to three years. Her monologues are analyzed for their proto-grammatical "quasi-clause" structures, for the formulating and fragmenting operations that generate them, and for the emergence of narrative and conversational structures which the monologues manifest. The theoretical framework for this analysis also is dialogical in nature, and just how this baby's language emerges in the form of "voices" out of a matrix including her

parents' "voices" will be shown. The results are comparisons of her monologic speech to her speech in dialogues with others, as well as a longitudinal account of how her monologues change in grammatical structure, narrative complexity, and even in conversational functioning.

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Nancy N. Soja, Northeastern University

Constraints on Early Word Meanings: Semantic or Conceptual?

Previous research has demonstrated that children's inference about word meaning respect ontological kind. As a result, in the case of objects, children base word meanings on object kind, not material kind. This ontologically based constraint may underlie all inductive inference for young children. In this case, word learning would be supported by preexisting, general-purpose representations. In contrast, the constraint may be specifically tailored for semantic acquisition.

Two experiments investigated this question about the independence of semantic development. In one children made predictions about weight. In the other they made predictions about food preferences. In these experiments the children based their inferences on material kind, not object kind. These results suggest that children's use of the ontological constraint for the induction of word meaning is not a new application of an old nonlinguistic constraint. Rather, even at an early age, language acquisition is segregated from the development of other cognitive processes.

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Michael D. Smith, Western Carolina University

Pre-Acquisition Lexical Use Patterns

Recent data collected in a longitudinal study of emergent lexicons and lexical use patterns spontaneously generated by twin girls will be reported. Results support the existence of what Snow and Ninio have referred to as pragmatically based production systems, and point to the existence of pragmatic deep structures. Primary attention will be given to the relationship between early lexical productions and what sound like blurred lexical combinations (wherein lexical boundaries are not clearly marked). The underlying theme will stress that first lexical productions are in good use prior to being acquired in a strict linguistic sense.

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Fernande Charron and Laura A. Petitto, McGill University

Semantic Categories in the acquisition of Langue des Signes  
Quebecoise (LSQ) and American Sign Language (ASL)

Although researchers in several countries have begun analyses of the acquisition of their indigenous sign languages, most of the studies have been conducted on only one sign language - American Sign Language (ASL), the language used by deaf people in the United States. Interestingly, even here, there are gaps in our understanding of important aspects of ASL's acquisition. For example, there are very few discussions in the literature of young deaf children's acquisition of semantic knowledge in ASL (Launer, 1982; Newport and Ashbrooke, 1977), and none (to our knowledge) with regard to other signed languages. In the present study, we provide a systematic, cross-linguistic and cross-modal analysis of this very issue. Specifically, data from deaf children of deaf parents who were acquiring Langue des Signes Quebecoise (LSQ) - a sign language that is wholly distinct from ASL - were examined for the first fifty signs (as in Nelson, 1973 and others). Additionally, data from deaf children acquiring ASL were analyzed for their acquisition of the first fifty signs/semantic categories. Intra-sign language comparisons were made (i.e., LSQ and ASL), as well as comparisons between the acquisition of semantic categories in signed and spoken languages. Results showed that deaf children's first signs consisted of highly similar semantic categories to those observed in hearing children. Moreover, deaf children acquire their first signs at the same age and rate as hearing children acquire their first words; sign iconicity did not enable deaf children to acquire language at an earlier age. This study provides cross-linguistic, cross-modal evidence that children appear to utilize similar semantic categories regardless of the language or its mode of transmission. These results will be discussed in terms of current theories concerning the nature and role of semantic knowledge in the language acquisition process.

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Roberta M. Golinkoff, University of Delaware and Kathy Hirsh-Pasek, Temple University

A New Picture of Language Development: Evidence from Comprehension

This paper is the first in a two part talk designed to familiarize researchers with the results from 7 experiments on language comprehension. Using Golinkoff and Hirsh-Pasek's preferential looking procedure, there is now evidence that (1) 13 month old, non-verbal infants comprehend a number of nouns and verbs, (2) 14 month olds with very limited vocabularies hear input as organized noun-verb packages rather than as a series of independent lexical items, (3) 17 month olds with virtually no word combinations in

their productive speech can use word order cues to comprehend active reversible sentences, and (4) 24 month olds can begin to use the argument structure of transitive vs. intransitive verbs to infer verb meaning. Minimally, these results suggest that the children's comprehension abilities are in advance of their productive abilities. When children are producing very little, they are already attuned to properties in the input that will assist them in constructing a grammar.

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Kathy Hirsh-Pasek, Temple University, and Roberta M. Golinkoff, University of Delaware

From Evidence to Explanation: Using Comprehension Data to Inform Theories of Language Acquisition

This paper is designed to raise anew, a number of theoretical questions that emerge in the context of the comprehension data presented above. First, why are the children's comprehension abilities so far ahead of their production abilities? Why do these differences emerge in Golinkoff and Hirsh-Pasek's paradigm, but not in other's? Second, where do these linguistic sensitivities come from? If the results of the comprehension data mirror those presented at later ages in production, then one must ask the now displaced question of how they come to emerge in children so young? Third, how does this new data impact on our current theories of language acquisition? Fourth and finally, how might we use this procedure to address future questions concerning (a) evidence for syntactic vs. semantic categories in these infants, and (b) the universality of these findings? Undoubtedly, this paper will raise many more questions than it will offer answers. In this vein, we hope to encourage discussion and to provide "food for thought."

\* \* \* \* \*

Sunday Morning

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John L. Locke, Massachusetts General Hospital

Babbling and Early Speech: Continuity and Individual Differences

At one time, babbling and early speech were thought to be discontinuous both in content and in time. With appropriate research, it now appears that the form of babble and speech, and the activities of babbling and speaking, are essentially overlapping and continuous. The meaning of these continuities, and the appropriate interpretation of individual differences, will be discussed in relation to developmental prediction.

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Shelley Velleman, Elms College

Mother-Child Interactions: A Longitudinal Microanalysis

We will report on results of a study of the relationship between specific types of child behaviors and specific types of maternal linguistic responses to these behaviors during the crucial transitions from pre-canonical babbling into babbling and from babbling into lexical communication. Mother-child dyads were videotaped in play sessions twice per month over a period of 12 months. Changes in maternal interaction styles (e.g. semantically contingent versus phonetically contingent responding) were noted in response to more mature infant vocal and gestural behavior (e.g., canonical babbling, pointing, etc.). In addition, mothers of infants with Down syndrome were compared longitudinally to mothers of nonhandicapped infants to determine similarities and differences in interactional style which may affect lexical acquisition by the infants with Down syndrome. Infants with Down syndrome were also compared to nonhandicapped infants in a search for similarities and differences which may influence maternal speech styles. Results of these comparisons will be presented.

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Marlys A. Macken and Charles A. Ferguson, Stanford University

Protowords: Linguistic Structure and Function

This study investigates "protowords" and related phenomena found at the transition from babbling to first words and examines their significance for understanding the emergence of linguistic structure and function, and the separation of linguistic structure from other communicative and symbolic competence. Data come from seven English-learning children who were audio- and video-recorded weekly from 9 to 16 months of age in free interaction with their mothers. Each session was one half-hour long. Data also include notes from the mothers' logs, data from a monthly questionnaire, and results from monthly administered Uzgiris-Hunt tasks. Phonological analysis charts segment types, word structures and (select) prosody (words, protoword types and babble analyzed separately). Lexical analysis charts the semantic and functional properties of utterance types, especially along these parameters: stability, reference type (e.g. proper name vs. category status); context and functions of use; iconicity; conventionalization (vs. child invention); and intentionality. Rate of vocabulary growth is charted. The data are used to explore three issues: what is the range of utterance types found during this period; what differentiates these types along semantic/symbolic, functional, and phonological dimensions; and what evidence do these data provide for/against a relation between phonology and lexico-semantic development.

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D. Kimbrough Oller, University of Miami

Precursors to Speech in Infant Babbling

The study of infant vocalizations in the past 15 years has drastically changed our view of the role of babbling in the development of speech. While it was traditionally believed that babbling consisted of mere random sound production, phonetically unrelated to early meaningful speech, it is now well-documented that the sounds occurring in babbling are limited to a relatively small set that is also the favorite inventory of young children in early meaningful speech. While it was previously believed that the phonetic content of babbling in deaf and hearing infants was the same, it is now clear that there are striking differences in the babbling patterns of deaf and hearing infants. It is still widely believed that the language environment of the infant affects the specific phonetic content of babbling. In fact, in spite of numerous experimental and descriptive phonetic attempts to demonstrate an impact of language background on babbling, the only clear outcome of such research is the demonstration that infants from different communities of language babbling in extremely similar ways. Progress in infant vocalization research has depended upon development of a common framework of description and interpretation of infant sounds. The framework indicates the relationships of babbling and speech at all stages of infant development. The presentation will focus on one model of description that has provided a basis for advancement in infant speech research. Data based upon the model from normal, Down syndrome and hearing impaired infants will be discussed.

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Sunday Afternoon

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Joanne L. Miller, Northeastern University

Speech Perception in Early Infancy

Research over the last two decades suggests that the infant comes to the task of speech perception with highly sophisticated processing abilities. This is perhaps most readily evident in the work on infant speech categorization. Not only can the young, prearticulate infant discriminate linguistically-relevant distinctions, but the processing system provides an initial, context-dependent categorical representation -- a base from which to acquire a phonology and lexicon. Since languages differ in their precise phonetic/phonological structure, however, these initial categorical representations must undergo some modification over the course of acquiring a particular language. It appears that such modification -- or "fine-tuning" begins to occur within the first year of life. This paper will provide an overview of

these aspects of early speech processing, drawing on specific examples from the literature.

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Marilyn May Vihman, Stanford University

The Interaction of Perception and Production in the Transition to Speech

The role of knowledge, or "top-down effects", on perceptual processing has long been established. Word frequency and semantic and syntactic contextual factors strongly influence the rate and accuracy of responses on perceptual tasks - for second-language learners and pre-school children as well as adults tested in their first language. It is reasonable, then, to look for the effect of pre-existing knowledge, or top-down structuring, on the perceptual processing of language at the outset, as the child makes the transition from babbling to speech. Unfortunately, investigators have so far succeeded in obtaining little reliable direct evidence regarding the perceptual processing of children at this age. The close relation between the form of babble and early words and the existence of phonological constraints on children's early word choices constitute converging indirect evidence, however. In this presentation I will argue that (1) early language comprehension is based on incomplete internal representations and (2) early perception is structured, at least in part, by the child's "knowledge" of his or her own dominant babbling patterns (based on discovery of the kinetic/auditory link).

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Lise Menn, University of Colorado

Communicative Function of Intonation Contour in Protolanguage

A few investigations (Halliday 1975, Menn 1979, Painter 1984) of the use of intonation contour during the transition from babble to speech have suggested that the child creates her own pragmatically-defined categories with contrasting contours, categories that have a partial basis in the ambient language but draw very different boundaries. However, too little work has been done to establish the generality of these findings. The conceptual and methodological barriers to progress in this area will be considered.

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Michael Studdert-Kennedy, Haskins Laboratories, New Haven

Where Do Segments Come From?

Language is often said to be a system of formal principles that develops by means of a special acquisition device, and is maintained by a specialized neural mechanism, or module. Phonological and syntactic categories are then viewed as axioms -- either "innate" or "natural", in the sense that they develop early and with little or no environmental input. Such an approach not only sidesteps the question of how language got to be the way it is (that is, how it evolved), but also ignores the fact that the development of even quite simple behavioral systems depends on environmental constancies no less than on genes. The present paper proposes that language ontogeny entails the progressive differentiation of language categories and principles by recapitulation of a logically required evolutionary sequence. More broadly, the paper views the neural structures underlying behavior (competence) as the product of behavior itself (performance). Language universals are thus a consequence, not a condition of development. The argument will be elaborated with evidence from recent studies of early phonological development, and by an account of the differentiation of phonemes and features from syllabic gestures, as illustrated in a computer simulation.

## THEORETICAL APPROACHES TO LANGUAGE ACQUISITION

### ACQUISITION OF BINDING

#### Friday afternoon

Helen Smith Cairns and Dana McDaniel, Queens College and the Graduate Center of the City University of New York

#### The Status of the Binding Principles in the Grammars of Young Children

This study investigated the status of Binding Principles A, B, and C in the grammars of English-speaking children ages 3 to 6. The children both acted out sentences and gave judgments about their grammaticality and reference properties. We found that Principle C is acquired early, with apparent violations an artifact of the act-out task. As others have attested, we found Principle B to be acquired relatively late. While a basic knowledge of Principle A is acquired early, we identified various versions of the Principle existing prior to its representation in the adult grammar.

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Diana Kaufman, Temple University

#### "Who's Him?": Evidence for Principle B in Children's Grammar

This study provides evidence of children's knowledge of Principle B, and of the factors contributing to their failure to display competency in earlier studies. 60 children, ages 2;7-6;5, were given a comprehension task modeled after the "truth-value" judgment task of Crain & McKee (1986). Children judged the acceptability of pronominal sentences, such as "The monkey scratched him", following pronominal and reflexive activity. Stimuli included simple and complex sentences with referential and quantified antecedents. A controlled interview followed each judgment.

Children's performance was generally unaffected by antecedent type, but was affected by sentence complexity, and pragmatic and discourse factors. Children's performance with sentences using full NPs only, such as "The man dried the elephant", revealed their preference for regarding all behavior- pronominal and reflexive- as pronominal. This finding is given as a possible explanation for many children in earlier studies responding as though they believed object pronominals can have reflexive interpretation.

Stephen Crain and Cecile McKee, University of Connecticut

Cross-Linguistic Analyses of the Acquisition of Coreference Relations

Universal Grammar proposes to explain children's rapid and relatively error-free acquisition of language by postulating innate constraints on grammar formation (Chomsky, 1971; 1975). Recent experimental findings provide evidence consistent with the tenets of Universal Grammar, revealing the development of a complex syntactic system on the basis of impoverished data. In a broader perspective, the model of language acquisition assumed here is continuous, in the sense that there are rigid limits to the changes that may characterize children's grammars over time, and to the differences that may exist between adults' and children's grammars (Hyams, 1983; Pinker, 1984).

One set of putative universal constraints concerns the phenomena of coreference relations between lexical noun phrases, pronouns, and anaphors. Taken together, these constraints form what is known as the Binding Theory (Chomsky, 1981). Coreference phenomena provide an especially rich area for investigating universal properties of language, since these relations are best characterized by structural conditions in the adult grammar. So, despite the existence of syntactic diversity across languages, the principles that govern coreference relations are expected to be invariant, hence universal. For example, the null pronoun in Italian and the corresponding overt pronouns in English are expected to obey the same binding condition. If these conditions on binding are part of children's innate linguistic knowledge, then in keeping with our assumption of continuity, we would expect these principles to be manifested in the grammars of children learning either language from the earliest stages of development. In addition to universal properties of coreference, there are aspects of assignment of reference and of disjoint reference that the binding conditions do not cover. These are also of special interest to us because they are language-specific properties and therefore must be learned. So, unlike innate universal principles, we might find that these properties are not present in children's grammars from the beginning. Also, there is the possibility that these factors might be mislearned.

To explore these issues, we are investigating 3-5 year olds' understanding of coreference relations in Italian, to compare to research on children learning English. The results to date can be summarized as follows. Italian children clearly obey the binding constraints on clitic anaphors. However, they fail to achieve the same high proportion of correct responses to sentences that contain clitic pronouns. The data relevant to lexical noun phrases is inconclusive, but we believe the problems lie in our selection of materials and not in children's grammatical

knowledge. The experiment on null pronouns has not yet been completed.

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Yu-Chin Chien and Kenneth Wexler, University of California at Irvine

A Comparison between Chinese-Speaking and English-Speaking Children's Acquisition of Reflexives and Pronouns

In this paper, we report 3 experimental studies regarding Chinese-speaking children's acquisition of the reflexive "ziji" and the pronoun "ta". "Ziji" is a reflexive, like English "herself", but it is a long-distance reflexive, that is, the antecedent does not have to be local. "Ta" is a pronoun. Like English "her", "ta" must be free locally. Previous studies of English (Wexler & Chien, 1985, Chien & Wexler, 1987) have shown that Principle A, governing reflexives, is correct for children at an earlier age than Principle B, governing pronouns. In this study, we report 3 experiments which basically replicate and confirm the English studies, for Chinese, extending them to the case of a long-distance reflexive. Study 1 is a picture-identification task studying knowledge of c-command properties. Study 2 is a version of an acting-out task (the "party game"), which studies knowledge of locality of antecedent. Chinese children seem to take the local antecedent for the reflexive as unmarked, as predicted by the Subset Principle (Wexler & Manzini, 1987, Wexler & Chien, 1987). For Chinese, as for English, Principle B develops later than Principle A. Study 3 is a "pragmatic lead" study, which attempts to disentangle whether children's preference for the local antecedent as unmarked represents syntactic or pragmatic knowledge. The answer seems to be that it is syntactic knowledge, thus lending some support to the Subset Principle.

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Hyeonjin Lee and Kenneth Wexler, University of California at Irvine

The Acquisition of Reflexive and Pronouns in Korean: From the Cross-Linguistic Perspective

In this paper, we assume the parametric model proposed by Wexler & Manzini (1987). We report an empirical study of anaphor in Korean. The study is designed to test the parametric difference of locality condition. Data are based on the results of an acting-out task of 90 Korean-speaking children and 15 adults. The results indicate that, with regard to the locality condition, children coindex the reflexive "caki" with the local c-commanding antecedent (i.e., the unmarked value of the locality parameter). Adults take either the local or the long-distance antecedent with a preference for the long-distance one. Children at the same age range indicate that they do not know the pronoun 'ku/kunye'. The

results are discussed under the framework of the Binding Theory, the Lexical Learning Hypothesis and the Subset Principle. The Korean results are compared with prior research on the acquisition of reflexives and pronouns of English (Chien & Wexler, 1987; Wexler & Chien, 1985).

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Barbara Lust and Gita Nartohardjono, Cornell University

On the Contribution of the Binding Theory Module to a Theory of the Acquisition of Anaphora

Several distinct approaches to a theory of the acquisition of anaphora characterize the field today. In each of these, the Binding Theory plays a distinct role in first language acquisition.

In this paper we will (i) articulate principal differences across these approaches, (ii) relate them to current linguistic theory of anaphora and of Universal Grammar; and (iii) to current results from experimental study of first language acquisition of anaphora within English and cross-linguistically.

We will argue for a model in which the BT applies continuously throughout acquisition to determine the continuous 'structure-dependence' and to guide lexical differentiation during the acquisition process.

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PARAMETERS, MATURATION, AND CROSS-LINGUISTIC PHENOMENA IN LANGUAGE ACQUISITION

Saturday morning

Nina Hyams, University of California at Los Angeles

The Initial State and the Theory of Markedness

This paper is concerned with some issues related to the child's initial grammatical state ( $S_0$ ) and the theory of markedness. It is often assumed that the principles and parameter settings of  $S_0$  represent the unmarked case. I will suggest that this is not necessarily the case and that there may be reasons entirely independent of markedness considerations which account for an initial parameter setting or grammatical principle. In particular, I will propose that the child's early grammar is constrained by an Isomorphism Principle according to which he will initially adopt a parameter setting (or rule) which results in the greatest degree of isomorphism between the different levels of grammar. Several properties of early language will be examined in

light of this principle, for example, the pro-drop phenomenon, sentence external negation, and the absence of NP movement.

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Diane Lillo-Martin, University of Connecticut

#### Parameters in the Acquisition of American Sign Language

Within a parameterized language acquisition theory, it can be hypothesized that the child knows from birth some aspects of language structure, but must learn other parts of his language through experience with it. In this paper, I will discuss the acquisition of American Sign Language (ASL) with respect to two such pairs of known and learned aspects of grammar. First, I will discuss the development of null argument (NA) structure in ASL. ASL allows NAs; following Hyams (1984) this can be assumed to be the initial hypothesis. However, in ASL the presence of verb agreement morphology is required for the licensing of NAs. This fact, and the complex system of ASL verb agreement, must be learned. Hence, children who have not fully mastered the verb agreement system may seem to make errors using null argument constructions. Second, I will discuss the development of tough-movement structures in ASL. Again, although aspects of this construction relate to proposed innate constraints, children must learn which verbs are involved. Here again, what must be learned influences the appearance (to the outside observer) of what is hypothesized to be innate.

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Amy Pierce, Massachusetts Institute of Technology

#### Null Subjects in the Acquisition of French

This paper discusses French child language data which suggest that an early form of grammar permits null subject (pro-drop) sentences, as well as syntactically related constructions.

Sentences missing subjects have been reported in accounts of the development of many languages, including languages in which null subjects are not an option licensed by the mature grammar. There is continued debate among acquisition theorists concerning the extent to which this phenomenon can be said to reflect structural principles that form part of the child's initial grammatical hypothesis (cf. Hyams, 1986), or is more accurately attributed to extrasyntactic factors such as early pragmatic strategies and limitations on processing.

Possible syntactic accounts of the French data are investigated, focusing on principles and parameters of Universal Grammar which might explain the optional subject-obligatory subject shift and concurrent trends in French acquisition.

\* \* \* \* \*

Paul Bloom, Massachusetts Institute of Technology

Parameter Theory and the Acquisition of Word Order

How can a principle-based grammar explain language acquisition? Within Government-Binding Theory, phrase structure rules do not exist. Rather, word order is a natural consequence of innate principles of Universal Grammar, some of which allow for parametric variation. One possibility is that children represent word order by means of directional parameters of X-bar syntax, parameters such as head-complement order and head-specifier order. It turns out, however, that children learning English go through a long period during which they omit certain lexical heads (prepositions and main verb copulas) but include the complements of these heads, i.e., they produce sentences like Mommy bathroom and John happy. The finding that children correctly order such sentences cannot be explained in terms of X-bar Syntax. One alternative is that a child's first representation of word order is through a directional parameter of predication--a subject-predicate parameter. Such a theory predicts that even very young children represent Adjective-Noun sequences (e.g., big doggie) as NPs and Noun-Adjective sequences (e.g., doggie big) as sentences. This prediction is supported by evidence from Braine's (1976) extensive review of language.

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Saturday afternoon

Katherine Demuth, Boston University

Acquisition of Impersonal Passive: A Matter of Case

Like Dutch and German, Sesotho can passivize intransitive verbs ("ho-bino" 'there was singing'), forming what we will call the 'impersonal passive'. Acquisition of Sesotho passive shows early control of short, full, adjectival and reversible passives (Demuth 1987). However, productive use of impersonal passive occurs somewhat after the other passive forms have been acquired. Machobane (1987) argues that the post-verbal NP in Sesotho impersonal constructions ("ho-tsamauoa batho" lit. 'there is gone people' (people have gone)) is assigned nominative case, thus qualifying as the true subject of these constructions. This analysis, however, runs counter to the morphological agreement facts in Sesotho, where the preverbal clitic (in this case "ho") marks the subject of the verb, and yet it would help explain why children might find this construction to be more difficult than other passive constructions. This paper examines the acquisition of Sesotho impersonal passive and concludes that productive use of this construction indeed requires the reassignment of nominative case to the post verbal NP, a rule which must be learned independently of normal passive formation. It is predicted that, in languages which allow passivization of intransitive verbs,

acquisition of impersonal passive will post-date acquisition of other passive constructions, and that acquisition of impersonal constructions, active or passive, will occur concurrently.

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Stephen Crain, Rosalind Thornton, Keiko Murasugi, University of Connecticut

#### Capturing the Evasive Passive

Full passives are rarely observed in children's spontaneous speech, in adult speech to children, or in pronouncements on foreign policy, e.g., "Mistakes were made." Despite the poverty of experience, verbal passives with by-phrases were elicited from nearly all of our 3 and 4-year-old subjects (N=36) by controlling the pragmatic context so that only the full passive is a felicitous response. The uniform success in eliciting these meaningful productions (utterance-meaning pairs) constitutes compelling evidence of children's grammatical competence with this construction. The results of testing these same children with two comprehension paradigms (act-out and picture-verification) show that, like spontaneous production data, these measures seriously underestimate children's linguistic knowledge. The findings from elicited production obviate the need to invoke maturation to account for the paucity of full passives in early child language, and reinforce the bond between linguistic theory and language acquisition research with additional evidence that the precepts of Universal Grammar are adhered to from the earliest stages of language acquisition.

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Jacqueline S. Johnson and Elissa Newport, University of Illinois

#### Critical Period Effects in Second Language Learning: The Influence of Maturational State on the Acquisition of Universal and Specific Aspects of English

Recent studies have provided clear-cut evidence for a critical period in first language acquisition. The present studies ask whether, and on what types of structures, such an age effect appears in second language acquisition.

Study 1 tests a wide variety of basic structures of English grammar in 46 native Korean or Chinese speakers who had arrived in the U.S. between the ages of 3 and 39, and who had been in the U.S. for many years. The results show a strong advantage for earlier arrival over later arrivals ( $r = -.77$ ).

Study 2 examines age effects on universal syntactic principles. Late learners of English were tested on subjacency. Preliminary results suggest that certain aspects of subjacency are preserved in late learners.

These two studies show a maturational critical period effect in second language for at least the acquisition of language-specific structures, with the possibility that universal linguistic principles remain intact throughout life.

\* \* \* \* \*

Kenneth Wexler, University of California at Irvine

Maturation, Continuity, Parameters and Reorganization in Language Acquisition

The question of reorganization in language acquisition is considered. We suggest that the issue has been confounded by the level at which reorganization is supposed to operate. In particular, we suggest that there is no reorganization at the level of universal grammar, the level of representational capacity. At this level, there might be simply a growth theory, with no reorganization. However, it does appear as if reorganization operates at the level of particular grammar, so the child's grammar, while within the limits of UG, is different from the adult's, and will reorganize in particular ways. Evidence is adduced for this point of view, and the restrained kind of maturation that it suggests. Topics covered will include the development of constraints on relations between predicates and external arguments, specifier-head relations and the development of binding relations.

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ACQUISITION OF VERBS AND ARGUMENT STRUCTURE

Sunday morning

Steven Pinker, Massachusetts Institute of Technology

A Theory of the Organization and Acquisition of Argument Structure

A central paradox in the study of language learnability is the acquisition of alternations that have lexical exceptions (e.g. give a book to the museum --> give the museum a book; donate a book to the museum --> \*donate the museum a book). The problem is that the regularity of the alternation would tempt a learner to coin a productive rule, but in the absence of negative evidence, there would be no way for the learner to know that it cannot apply to certain words, and so the exceptions should not survive in the language. Although there are subtle criteria that distinguish the exceptional verbs from the rule-governed ones (e.g. dativizable verbs are monosyllabic and convey changes of possession), the suggestion that children use these criteria to define the domain of application of their rules has been criticized on several grounds; the criteria don't really work; it's a mystery how they got into the language; it's unclear how the child would learn

them. I propose a theory of the structure and acquisition of the verb lexicon that meets these objections. Its principle tenets are: (1) Grammatical relations are universally linked to specific thematic roles. (2) Thematic roles are cognitively vague: it is often unclear from the inherent meaning of a verb whether it assigns one role or another. (3) Each language makes a set of semiarbitrary choices as to which kinds of verbs may be construed as assigning which thematic roles. (4) These choices consist of pairing sets of thematic roles with narrow, semantically cohesive subclasses of verbs, defined jointly by a conflation of semantic elements and a semantic field in which the elements are interpreted. (5) The "criteria" that appear to delimit the range within which rules can apply are actually the definitions of these subclasses.

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Melissa Bowerman, Max Planck Institute for Psycholinguistics

Mapping Thematic Roles onto Syntactic Functions: Are Children Helped by Innate "Linking Rules"?

What information about language structure do children bring to the language acquisition task, and what do they have to learn "from scratch"? This most basic question about language acquisition must continually be re-evaluated as linguists identify new cross-linguistic regularities in language structure that might plausibly be attributed to the child's innate capacity for language.

This paper considers the recent hypothesis that in acquiring subcategorization frames for verbs, children are assisted by a priori knowledge of universal "linking rules": regular associations between the semantic/thematic roles played by the arguments of verbs and the syntactic functions of subject, direct object, and oblique object (e.g., Levin, 1985; Pinker, 1984). Both theoretical considerations and empirical evidence are presented.

It is concluded that, at present, there is little evidence that children draw on unlearned knowledge of linking rules in acquiring subcategorization frames. For example, children do not make the initial mapping errors that would be predicted for "noncanonical" verbs (verbs that violate the proposed linking rules), nor do they seem to take longer to learn the syntactic handling of noncanonical verbs than canonical verbs, given roughly similar exposure in the input. The evidence is most compatible with the hypothesis that children learn linking rules on the basis of the patterns that predominate in the language they are acquiring, rather than benefiting from associations known ahead of time.

\* \* \* \* \*

Thomas Roeper, University of Massachusetts-Amherst

The Argument Structure Hypothesis: The Acquisition of Argument Structure Precedes the Acquisition of Thematic Roles

It is widely believed that children begin with primitive "semantic" relations. These relations, moreover, are believed to be roughly identical to thematic roles used in linguistic theory.

We believe the opposite hypothesis can be defended: syntax is learned without any isomorphic semantic mapping. Under the isomorphic hypothesis one expects children to learn John hit Bill early and John took a bath late. There is no evidence that children find the latter kind of sentence difficult to learn. If children have "meaning postulates" then they can learn "take a bath" as a semantic unit but with normal syntactic argument structure.

Our claims have three assumptions:

- 1) Children begin with a syntactic bracketing of sentences (Gleitman and Landau, 1985) which can be independently determined.
- 2) Primitive semantic relations are not projected as thematic roles (Marantz, 1984).
- 3) Formal thematic roles are different from semantic roles, but dependent upon them (Finer and Roeper, to appear).

A variety of kinds of evidence support this view:

- 1) A child can learn the position of subjects from intransitives without thematic roles. It is not clear that children regard Ball as agent or theme in the ball rolls although these structures appear very early. A notion that agents are subjects should make such structures very late.
- 2) Children have specific interpretations like: "saw wood". They will not allow saw to occur with anything else (Nygren, 1972).
- 3) Children must learn that a formal agent is associated with verbs and this is distinct from a semantic agent. At the early stages they have semantic agent, which allows them to say "shirter". When they learn that -er is associated with the formal verbal agent (or external argument), then they can eliminate "shirter" and also allow the robber of the bank while excluding \*the cook of stew.

This perspective leads to various conclusions:

- 1) Thematic roles are a formal entity linked to verbs and are not reducible to externally defined notions like "agent", "patient", "goal", etc.
- 2) The Projection Principle (PrP), which requires uniformity of thematic roles at all levels, does not structure the primary data in the manner often suggested (Chomsky, 1981; Pinker, 1984, and others).
- 3) It is when children use the formal notion of agent in syntactic relations that a shift from semantic to formal agent occurs. This could be the result of either maturation or triggering via implicit argument contexts.

4) A number of syntactic properties of language are more accessible to children than semantic properties.

\* \* \* \* \*

W. Neil Elliott, University of California at Irvine

#### On Acquiring the Category Verb

Roughly speaking, the child learning verbs performs three separate tasks. One, the language learner acquires individual verbal concepts or meanings and associates those meanings with the phonological representations appropriate to her language. Two, the child learns that lexical items expressing a heterogeneous variety of verbal concepts are grouped into the form class, verb (V). Three, the child forms subcategories of verbs, such as unergative and unaccusative intransitives, transitives, ditransitives, etc.

In this paper, little is said about how the child acquires individual verbal concepts. I assume that the human organism is supplied from the outset of linguistic development with some vocabulary of semantic features. Learning complex verbal concepts is composing semantic features into the "meaning" of a verb. However, I do want to address the question of how the child comes to grasp the syntactic notion, V, and organize that form class into subcategories.

On the hypothesis I propose, the child uses conceptual features to pick out nouns. In other words, nouns (N) are bootstrapped. Once a group of nouns has been isolated, no further bootstrapping is required. In particular, it is not the case that the category V is determined by reference to a conceptual substrate. Rather, it is properties of UG which permit the language learner to determine syntactically which morphemes in input data count as V's. The paper will compare two theories of how this may come about.

The first view depends on labelled phrasemarkers. On this hypothesis, the child is acquiring categorically marked lexical items and categorically labeled phrasestructure rules (PSR's) determining constituent order and dominance relations. The opposed theory is categorically neutral. It is based on the observation that constraints on phrasemarkers should be abstracted away from word order and category labels.

The balance of the paper examines two problems. First, what permits the child to distinguish between V and P, and, hence, acquire verbs through knowledge about Case assignment? Second, what happens when Case is not assigned by V or P? To the extent that the categorically-neutral theory can answer these questions, it is preferred as the most restrictive theory. Hence, I conclude that the categorically neutral theory is an appropriate theory for verb learning.

\* \* \* \* \*

Sunday afternoon

Jess Gropen, Steven Pinker, and Richard Goldberg, Massachusetts Institute of Technology

Constrained Productivity in the Acquisition of Locative Forms

"Constrained Productivity" in language acquisition was assessed using locative forms (stuff toys into the box/stuff the box with toys). We addressed a construal of Constrained Productivity in which universal tendencies of language motivate the learning of specific constraints; in these experiments, we explored the universal tendency for direct objects to encode the most affected entity. We first tested children and adults on the meaning and syntax of common locative verbs. Children were biased towards interpreting verb meaning in terms of how the substance was affected, and they overgeneralized the locative form with the substance encoded as direct object. We then taught children and adults novel verbs which were modeled in a neutral form, but differed as to which entity--substance or container--was affected in a specific way. Subjects produced locative forms which encoded as direct object the most affected entity. Our results support the hypothesis of Constrained Productivity and suggest that although children observe the universal of Object Affectedness, they first assume in learning a new locative verb that if an entity changes location, it must be affected.

\* \* \* \* \*

Lila Gleitman, University of Pennsylvania

The Acquisition of Verbs by Syntactic Bootstrapping

Language development, including the semantic content of lexical entries, is virtually identical for sighted and congenitally blind individuals despite radical differences in their extralinguistic experiences (Landau and Gleitman, 1985). Such findings, and certain logical considerations, suggest that extralinguistic experience alone may be an insufficient (though surely necessary) basis for the discovery of word meaning by the child. We suggest that learners also exploit the semantically relevant structure of clauses as a source of evidence for constraining conjectures about the meaning of verbs; that is, learners can deduce meanings from form. We have dubbed this procedure "syntactic bootstrapping". This move would require that infants can and do exploit physical evidence in the sound stream to construct rudimentary parse structures; the evidence that they do is strong (Gleitman and Wanner, 1982; Gleitman, Gleitman, Landau and Wanner, 1987). Experimental evidence for semantic/syntactic correlations in verb representation by both adults and children will be presented in support of this position.

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Letitia Naigles, University of Pennsylvania, Kathy Hirsh-Pasek, Temple University, Roberta Golinkoff, University of Delaware, Lila Gleitman and Henry Gleitman, University of Pennsylvania

From Linguistic Form to Meaning: Evidence for Syntactic Bootstrapping by Two-Year Olds

When "the zebra blicks the lion", do we expect some causal relation between the lion and the zebra, or do we expect a lion and a zebra who are blicking? This question exemplifies the notion of syntactic bootstrapping: that young language learners use information in the linguistic frame to direct their attention to properties of actions and events in their world. Using Golinkoff and Hirsh-Pasek's (1981) comprehension paradigm, this study investigates the plausibility of the syntactic bootstrapping hypothesis. Ninety-six subjects in three age groups, younger (18-21 months), middle (22-26 months), and older (27-30 months) sat midway between two video screens on which they saw causal (transitive) e.g., "BigBird squats Cookie Monster" and simultaneous noncausal (intransitive) e.g., BigBird and Cookie Monster squat" actions. The actions portrayed were both familiar verbs in new contexts (known) or unfamiliar verbs in new contexts (unknown). The results (especially for the transitive audio condition) support the syntactic bootstrapping hypothesis. By as young as two years, female subjects were using syntactic knowledge to look towards the matching screen for known verbs. By 28 months, both boys and girls can use this information across both known and unknown verbs. Such strong evidence suggests that young children are attuned to some implications of syntactic organization in their comprehension of language.

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POSTER SESSIONS

Saturday and Sunday

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

"Mommy Mad?": Emergence of an Internal State Lexicon in Low SES Maltreated and Nonmaltreated Toddlers

The present study assessed the impact of low SES and early child maltreatment on toddlers' production and mastery of internal state words. The communicative behavior of 26 maltreated and nonmaltreated children from families receiving welfare support was examined longitudinally when children were 24, 30, and 36 months of age. Analyses were based both on observations of child language during mother-child interaction in two laboratory contexts and on an intensive maternal interview. Measures included the diversity, content, and complexity of children's

internal state utterances as well as measures of general linguistic maturity. Results indicated that the developmental course of this type of lexical development in nonmaltreated low SES toddlers is largely similar to that observed in middle class samples in prior research. However, by 30 months maltreated low SES toddlers showed significant delays in language development and produced proportionately less frequent and less complex internal state utterances which differed in both content and attributional focus from that observed in the nonmaltreated toddlers. Implications for the development of children with a history of maltreatment are discussed.

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Beverly Goldfield, Harvard University, Marjorie Beeghly, Harvard Medical School, and Dennis Wolf, Harvard University

#### Form and Function in Narrative and Dialogue Within a Replica Play Task

The present study was designed to systematically vary the situations which might elicit narrative and character speech in order to examine the interaction of linguistic features and functions in children's language during a story task. Thirty children aged 3 to 5 years were presented with the same story-start in three different situations, each one biased toward a different kind of text: narrative, character speech, and a mixture of both. As narrators, children used predominantly third person pronouns, declarative sentences, connectives, and a variety of verb tenses. As characters, children used first and second person pronouns, a wider range of sentence forms, a narrower range of verb tenses, fewer connectives, and many conversational formulae. The stories of older children, moreover, were more complex and multifunctional, with characters often narrating story events and indirect speech embedded in narrative. The results are evidence for an early origin to the ability to adapt speech within as well as across situations.

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Henrietta Lempert, University of Toronto

#### Learning Noun Order in Passives: Effect of Animacy, Givenness, and Salience

A basic issue in language acquisition is the extent to which language learning draws upon communicative and general cognitive processes as opposed to language-specific processes. A substantial literature in psycholinguistics and in language typology suggests that grammatical subjects map upon features such as animacy, givenness, and salience. The present work used passive sentence training to investigate whether these features influence learning about sentence subjects. In the training phase, 72 children ages 2-10 to 4-7 years (mean, 3-6) who did not

understand passives imitated passive sentence descriptions of animate agent drawings and described other pictures by themselves (probes). Thirty-six received animate (A) patients and 36 inanimate (I) patients. Training occurred under one of three conditions; (a) Salience, in which the patient was colored in 50% of stimuli, (b) Given + Salience, in which children also named a picture of the patient before responding to probes, and (c) Control. All received post-training drawings in which patient animacy and verb (training vs. "new" verbs) were orthogonally combined.

A-patient children produced significantly more passives to training and post-training probes than I-patient children. Patient animacy was the only training manipulation that significantly affected passives to training and post-training probes. I-patient children produced comparable post-training passives to animate and inanimate patients whereas A-patient children produced more to the former than the latter. Both produced more passives to "old" than to "new" verbs, but this survived tests for generality only for passives by A-patient children to inanimate patients. Analysis of their responses to individual verbs suggested that the implied dynamicity of the patient influenced use of active versus passive sentence descriptions. To summarize, the outcomes imply that animacy is a conceptual distinction that has relevance for language learning. Whether this reflects a distinction between animate and inanimate or a distinction based on "dynamicity" remains to be determined.

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Carolyn B. Mervis and Kathy E. Johnson, University of Massachusetts-Amherst

#### Acquisition of the Plural Morpheme: A Case Study

One child's acquisition of the English plural morpheme for nouns was examined. Data were extracted from a comprehensive diary study (35,500+ entries) of early lexical development. A complete account of this child's acquisition of the plural morpheme for nouns, including the roles of conceptual development and parental input, is proposed. Four stages are included: pre-plural, during which important concepts relevant to acquisition of plurals were acquired, although plural forms did not occur; transitional, during which plurals sometimes were used; child-plural, during which plurals were used in all obligatory situations but several types of errors in the form of the plural morpheme occurred (including some not identified in previous studies); and adult-plural, during which the correct form of the plural morpheme virtually always was used. Detailed descriptions of the four stages are provided. Errors of omission and overregularization are examined throughout development as indicators of underlying linguistic structure.

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Evangeline Nwokah and Alan Fogel, Purdue University

Cross-Cultural Differences in Baby-Talk to Infants- The Missing Links?

This paper looks at the range of cross-cultural variations which have been observed in talk to babies by adults. Examples of differences on five levels are given--prosodic, structural, functional, content, and pragmatic. A model is proposed that shows how the relative weightings on certain factors in the cultural context might predict the form of register used. Such factors are identified as 1) parental belief systems on language learning, parental roles and infant capabilities, 2) learned imitation of communication styles, 3) cultural status of children and behavioral expectations, 4) perspective-taking, 5) human nurturant behavior, and 6) the cultural use of linguistic and paralinguistic patterns and cues to express meanings and emotion. The cultural context determines which of these are primary influences on adult speech to infants, and which are secondary.

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Michael Tomasello, Sara Mannle, and Lauri Werdenschlag, Emory University

The Effect of Known Words on the Child's Acquisition of New Words

The current study compared the child's object-word learning in two conditions: when the referent was highly similar to that of a known child word and when it was highly dissimilar. Twenty-two 2-year-old children were taught a word. In a session several days subsequent, they were taught two new words: one with a referent highly similar to that of the originally learned word and one with a referent that was highly dissimilar (two stimulus sets assured counter-balancing). In this session, children spontaneously produced the word with the similar referent more often than the word with the dissimilar referent. In two later sessions (separated by several days each), children showed greater comprehension of the similar word. These results were interpreted as evidence that when the young child hears a new word used for a referent that s/he would have referred to with a known word, a heightened attention to the new word is produced and acquisition is facilitated.

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## INDEX OF CONFERENCE SPEAKERS

Beckwith, Richard: Saturday morning, Precursors to Language  
 Beeghly, Marjorie: Poster session  
 Bennett, Adrian: Sunday morning, Literacy in Theory and Practice  
 Besnier, Niko: Saturday afternoon, Literacy in Theory and Practice  
 Bloom, Lois: Saturday morning, Precursors to Language  
 Bloom, Paul: Saturday morning, Theoretical Approaches  
 Bowerman, Melissa: Sunday morning, Theoretical Approaches  
 Cairns, Helen: Friday afternoon, Theoretical Approaches  
 Carey, Susan: Saturday afternoon, Theoretical Approaches  
 Cazden, Courtney: Sunday morning, Literacy in Theory and Practice  
 Charron, Fernande: Saturday afternoon, Precursors to Language  
 Chien, Yu-Chin: Friday afternoon, Theoretical Approaches  
 Choi, Soonja: Saturday morning, Precursors to Language  
 Cicchetti, Dante: Poster session  
 Crain, Stephen: Friday afternoon, Saturday afternoon, Theoretical Approaches  
 Curtis, Mary E.: Saturday morning, Literacy in Theory and Practice  
 Demuth, Katherine: Saturday afternoon, Theoretical Approaches  
 Dore, John: Saturday afternoon, Precursors to Language  
 Elliott, W. Neil: Sunday morning, Theoretical Approaches  
 Erickson, Frederick: Sunday morning, Literacy in Theory and Practice  
 Ervin-Tripp, Susan: Friday Night, Keynote Address  
 Ferguson, Charles: Sunday morning, Precursors to Language  
 Fogel, Alan: Poster session  
 Gee, James Paul: Sunday afternoon, Literacy in Theory and Practice  
 Gleitman, Henry: Sunday afternoon, Theoretical Approaches  
 Gleitman, Lila: Sunday afternoon, Theoretical Approaches  
 Goldberg, Richard: Sunday afternoon, Theoretical Approaches  
 Goldfield, Beverly: Poster session  
 Golinkoff, Roberta: Saturday afternoon, Precursors to Language; Sunday Afternoon, Theoretical Approaches  
 Gopnik, Alison: Saturday morning, Precursors to Language  
 Grimshaw, Jane: Sunday afternoon, Theoretical Approaches  
 Groden, Suzie: Friday afternoon, Literacy in Theory and Practice  
 Gropen, Jess: Sunday afternoon, Theoretical Approaches  
 Hagreen, Marybeth: Saturday morning, Literacy in Theory and Practice  
 Hicks, Deborah: Saturday morning, Literacy in Theory and Practice  
 Hirsh-Pasek, Kathy: Saturday afternoon, Precursors to Language; Sunday afternoon, Theoretical Approaches  
 Hudson, Judith: Saturday morning, Literacy in Theory and Practice  
 Hyams, Nina: Saturday morning, Theoretical Approaches  
 Johnson, Jacqueline: Saturday afternoon, Theoretical Approaches  
 Johnson, Kathy: Poster session  
 Kaiser, Ann: Saturday morning, Precursors to Language  
 Kaufman, Diana: Friday afternoon, Theoretical Approaches  
 Kutz, Eleanor: Friday afternoon, Literacy in Theory and Practice  
 Lee, Heonjin: Friday afternoon, Theoretical Approaches

Lempert, Henrietta: Poster session  
 Lillo-Martin, Diane: Saturday morning, Theoretical Approaches  
 Locke, John: Sunday morning, Precursors to Language  
 Lust, Barbara: Friday afternoon, Theoretical Approaches  
 Lytle, Susan: Saturday afternoon, Literacy in Theory and Practice  
 MacGowan, Adele: Saturday afternoon, Literacy in Theory and Practice  
 Macken, Marlys: Sunday morning, Precursors to Language  
 Mannle, Sara: Poster session  
 Martohardjono, Gita: Friday afternoon, Theoretical Approaches  
 McDaniel, Dana: Friday afternoon, Theoretical Approaches  
 McKee, Cecile: Friday afternoon, Theoretical Approaches  
 Menn, Lise: Sunday afternoon, Precursors to Language  
 Mervis, Carolyn: Poster session  
 Michaels, Sarah: Sunday afternoon, Literacy in Theory and Practice  
 Miller, Joanne: Sunday afternoon, Precursors to Language  
 Mitchell, Candace: Friday afternoon, Literacy in Theory and Practice  
 Murasaki, Keiko: Saturday afternoon, Theoretical Approaches  
 Naigles, Letitia: Sunday afternoon, Theoretical Approaches  
 Newkirk, Thomas: Saturday morning, Literacy in Theory and Practice  
 Newport, Elissa: Saturday afternoon, Theoretical Approaches  
 Nwokah, Evangeline: Poster session  
 Oller, D. Kimbrough: Sunday morning, Precursors to Language  
 Petitto, Laura: Saturday afternoon, Precursors to Language  
 Pierce, Amy: Saturday morning, Theoretical Approaches  
 Pinker, Steven: Sunday morning, Sunday afternoon, Theoretical Approaches  
 Roeper, Thomas: Sunday morning, Theoretical Approaches  
 Roth, Priscilla: Saturday morning, Precursors to Language  
 Schecter, Miriam: Saturday morning, Literacy in Theory and Practice  
 Schecter, Sandra: Saturday morning, Literacy in Theory and Practice  
 Smith, Michael: Saturday afternoon, Precursors to Language  
 Snow, Catherine: Sunday afternoon, Literacy in Theory and Practice  
 Soja, Nancy: Saturday afternoon, Precursors to Language  
 Street, Brian: Saturday afternoon, Literacy in Theory and Practice  
 Studdert-Kennedy, Michael: Sunday afternoon, Precursors to Language  
 Thornton, Rosalind: Saturday afternoon, Theoretical Approaches  
 Tomasello, Michael: Poster session  
 Trimbur, John: Sunday morning, Literacy in Theory and Practice  
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 Werdenslag, Lauri: Poster session  
 Wexler, Kenneth: Friday afternoon, Saturday afternoon, Theoretical Approaches  
 Wolf, Dennis: Poster session; Saturday morning, Literacy in Theory and Practice  
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## MODULARITY

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Jan Koster, The University of Groningen, Netherlands,  
and Charlotte Koster, Max Planck Institute, Nijmegen,  
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### The Acquisition of Bound and Free Anaphora

Most linguists assume that bound anaphors, like himself, are connected with their antecedents in a different way from free anaphors, like him. Bound anaphora resolution is deterministic, based on principle A of Chomsky's Binding Theory. Free anaphors, pronominals, cannot be bound in the domain of reflexives (principle B); their interpretation is largely determined by non-grammatical factors. Thus, the resolution of bound and free anaphors exploits different modules of knowledge. Since different kinds of knowledge are involved, a reasonable expectation is that a different development can be found for the two kinds of anaphor resolution in language acquisition. To test this expectation, experimental studies were designed to investigate how Dutch children (four to ten years old) interpret sentences involving reflexive and non-reflexive anaphors. The results showed a difference in the rates of acquisition for the two types of anaphors. This experimental finding is taken as support for the view that bound and free anaphora resolution involve different kinds of knowledge.

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