Linguistic Society of America

FIFTY-FIRST ANNUAL MEETING
DECEMBER 28-30, 1976
PHILADELPHIA, PENNSYLVANIA

Meeting Handbook
The LSA Secretariat has prepared this Meeting Handbook to serve as the official program for the Fifty-First Annual Meeting of the Linguistic Society of America. The abstracts (arranged in alphabetical order by author) are photocopies of originals submitted to and accepted by the LSA Program Committee. The Program Committee was chaired by Janet Dean Fodor and consisted of Eve Clark, John Fought, Sally McLendon, Ernst Pulgarín, Ivan Sag, and Michael Silverstein.

We would like to take this opportunity to formally acknowledge the help which has been given by the Philadelphia Local Arrangements Committee. This Committee was chaired by Ivan Sag, University of Pennsylvania, and consisted of Gerald Ferree, St. Joseph's College; Ellen Prince, University of Pennsylvania; George Cardona, University of Pennsylvania; Gary Milsark, Temple University; Rosane Rocher, University of Pennsylvania; and William Labov, University of Pennsylvania.

We hope that this Meeting Handbook will be a useful guide for those attending the meeting, as well as serve as a permanent record of the 51st Annual Meeting.

LSA Secretariat
December 1976

CASH BARS

Cash bars are scheduled from 8:30 p.m. until 10:00 p.m. on 27 December and from 5:30 p.m. until 7:00 p.m. on 28 December in Salon DE. Byron Bender, the Director of the 1977 Linguistic Institute to be held at the University of Hawai'i, and members of the Institute faculty will be available at the Cash Bar on 28 December to discuss the plans for the Institute and answer inquiries.

RECORDING OF SESSIONS

The Linguistic Society has made arrangements with Track 2 Taping of Rockville, Connecticut to tape record sessions at the 1976 Annual Meeting. All papers presented by authors who have given their permission will be taped, as well as the discussion period following the papers. Cassette tapes will be available for purchase by meeting participants approximately 25 minutes after each session is recorded.

Each three hour session will be taped in two ninety minute segments with one segment available for $5.50 or the entire session on two tapes for $10.00. In addition, Track 2 Taping offers a special discount for quantity orders.

campus at 33rd and Spruce Streets in West Philadelphia.

INTRODUCTORY NOTE

There will be an LSA Book Exhibit of recent publications in Salon H. The exhibit is scheduled to be open at the hours listed in the Program General Information.

Display copies in the LSA Joint Book Exhibit will be sold at the proceeds donated will be given to the Linguistic Institute. Copies have been generously donated by the publishers exhibiting in the LSA Book Exhibit. Orders for display copies at a discount of 50% greater than that paid by the publisher, will be taken at the Exhibit. Orders in progress if accompanied by pre-payment. Books must be picked up at 3:00 p.m. on 30 December or they will be held and the advance payment donated to the Linguistic Institute Fellowships.

BUSINESS MEETING

This year the business meeting has been held in Salon F6 on the afternoon of December 27 from 2:00 p.m. to 4:30 p.m. The meeting will be chaired by Rulin S. Wells, 1977 LSA President. The members of the Nominating Committee for this meeting are Bruce Fraser, chairman, Robbins Burling, and Ivan Sag.

PRESIDENTIAL ADDRESS

Rulin S. Wells, 1976 LSA President, will deliver the presidential address on 29 December at 4:45 p.m. The address is entitled "Suggested Meaning."

GENERAL SCIENCE FOUNDATION

Dr. Paul Chapin, National Science Foundation's (NSF) Program Director for Linguistics, will be available to meet with members and delegates in the Boston area at the following times:

- Monday, 28 December, 3:00-4:00 p.m.
- Tuesday, 29 December, 10:30 a.m.-4:00 p.m.
- Thursday, 30 December, 10:30 a.m.-4:00 p.m.

MAC ROB'S CHEESE RECEPTION

The Department of Linguistics and the City of Arts and Sciences of the University of Pennsylvania have graciously arranged a wine and cheese reception in the Rotunda Gallery of the University of Pennsylvania Museum following the Presidential Press, Wednesday, 29 December. The reception will be held from 6:15 p.m. until 8:30 p.m. All meeting participants have been invited to attend this special event. Transportation from the Marriott to the Museum has been arranged. The Museum is

...
1976 LSA ANNUAL MEETING
Philadelphia, Pennsylvania
General Information

Registration, Job Placement, LSA Book Exhibit

Registration for the 1976 LSA Annual Meeting will be conducted in the North Lobby. The Job Placement Center will be located in Salons A, B and C. Salon H will be the site of the LSA Book Exhibit.

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<thead>
<tr>
<th>Registration</th>
<th>Placement</th>
<th>Book Exhibit</th>
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<tbody>
<tr>
<td>Monday</td>
<td>7:00-9:00 PM</td>
<td>8:00 AM-4:00 PM</td>
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<tr>
<td>Tuesday</td>
<td>8:00 AM-4:00 PM</td>
<td>8:30 AM-6:00 PM</td>
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<tr>
<td>Wednesday</td>
<td>8:00 AM-Noon</td>
<td>8:30 AM-6:00 PM</td>
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<tr>
<td>Thursday</td>
<td>9:00 AM-Noon</td>
<td>8:30 AM-Noon</td>
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SPECIAL INTEREST HIGHLIGHTS

<table>
<thead>
<tr>
<th>Monday</th>
<th>LSA Executive Committee</th>
<th>9:00 AM-5:00 PM</th>
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<tbody>
<tr>
<td>Cash Bar</td>
<td></td>
<td>8:30-10:00 PM</td>
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<tr>
<td>Tuesday</td>
<td>Cash Bar</td>
<td>5:30-7:00 PM</td>
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<tr>
<td>Wednesday</td>
<td>Past Presidents' Breakfast</td>
<td>8:00-10:00 AM</td>
</tr>
<tr>
<td>LSA Business Meeting*</td>
<td>2:00-4:30 PM</td>
<td>Boston Room</td>
</tr>
<tr>
<td>Presidential Address: &quot;Suggested Meaning&quot;</td>
<td>4:45 PM</td>
<td>Salon F6</td>
</tr>
<tr>
<td>Wine &amp; Cheese Reception</td>
<td>6:15-7:45 PM</td>
<td>Oriental Gallery &amp; Pennsylvania Museum</td>
</tr>
</tbody>
</table>

*LSA Resolutions Committee: Lynn Waterhouse, Chairman, Robbins Ruling and Bruce Fraser.
TUESDAY, 28 DECEMBER 1976

SYNTAX I
Salon FG
Chair: Bruce Fraser
9:00
9:30
Ivan A. Sag (U Pennsylvania) Maximality & Recoverability of Deletion
10:00
Neriko McCawley (U Chicago) Why Tense-Movement is Impossible with 'Possible'
10:30
Break
10:45
Ivan Kalmar (U Toronto) The Antipsychotic Construction & the Case Against Redundancy
11:00
Anthony Naro (U Federal, Rio) A Historical Parallel Between Passives & Adjectives
11:30
Joan Casper Kahr (Stanford U & Harvard U) Towards a Relational Characterization of Passives & Imperfectives

PHONOLOGY I
Salon J
Chair: James E. Hoard
9:00
Robert K. Herbert (Ohio State U) Phonological Aspects of Tonal Downstep
9:30
Samuel Bolotzky (Tel Aviv U & U Illinois) On Surface Phonetic Constraints in Fast Speech
10:00
Peter Ladefoged (UCLA) The Inadequacy of Feature Specifications
10:15
Break
10:30
George Clements (Harvard U) Phonological Coalescence
11:00
Catherine Ringen (U Iowa) & Gregory Iverson (U Wisconsin) On Constraining the Theory of Exceptions
11:30
Ralph Vanderslice, Autonomous Phonology, Phonemic Overlap & the Red Herring of Invariance

ROMANCE Salon K
Chair: Ernst Pulgram
9:00
Deering Blazer (U Texas) Indefinite Articles & Referentiality
9:30
Dieter Wanner (U Illinois) The Development of Clitics
10:00
Eugene Pena (Indiana U) The Metaphony of (/i/, /j/ in Central & Southern Italy
10:30
Break
11:00
Ian R. Smith (Cornell U) Evolution of Stress & Vowel Length in Sri Launke Portuguese
11:30
Matthew Lennig (U Pennsylvania) Continued Chain Shifting of /j/ and /w/ in Parisian French

SYNTAX II
Salon FG
Chair: Samuel Jay Keyser
2:00
Peter Cole (U Illinois) The Grammatical Role of the Causee in Universal Grammar
2:30
Timothy Light (U Arizona) Word Order & Word Order Change in Mandarin Chinese
3:00
James Tai (Southern Illinois U) Temporal & Spatial Scopings & Word Order in Chinese
3:30
Break
4:00
Alice C. Harris (Harvard U) Inversion as a Rule in Universal Grammar: Georigian Evidence
4:30
John Haiman (U Montana) Conditionals
5:00
Mushira Eid (U Minnesota) Arabic Relativization: Shadow Deletion or Pronoun Drop?

PHONOLOGY II
Salon J
Chair: Wolfgang Dressler
2:00
Larry Hyman (U Southern California) A Reanalysis of Tonal Downstep
2:30
Jean-Marie Humbert (UCLA) Tone Space & Universals of Tone Systems
3:00
Break
3:30
Graham Thoeng (Dalhousie U, Canada) The Origins of Burmese Creaky Tone
4:00
Jack Gandour (Bell Labs) & Richard Horsman (U Western Ontario) A Cross-Language Study of Tone Perception
4:30
Deborah Osnes, Stanford U A Continuum of Stress Types
5:00
Richard S. Pittman (SIL) The Explanatory Potential of Voice Register Theory as Topics

ROMANCE Salon K
Chair: Minfred PeLegman
9:00
Glendon Drake (San Diego State U) Velbon on Language
9:30
George Dunkel (Johns Hopkins U) Resumptive Preverb Deletion in IE?
10:00
Robert Jefferies (Ohio State U) & William Papertello (McGill) The Expression of Purpose in Indo-European
10:30
Break
11:00
Josh Ard (Indiana U) A Reanalysis of the Origin of Definite Adjectives in Baltic & Slavic
11:30
Linda Kopp-Loof (U Texas) Morphological Palatalization in Russian Verbs
5:00
Alice Faber (U Texas) A-L Alternations in Biblical Hebrew & Northwest Semitic
1:30
Lee A. Goral (Illinois U) Mothers’ Questions to Children
1:30
Catherine J. Garvey (Johns Hopkins U) Some Ways of Asking Conversational Repair Questions
2:00
Jean Berko Gleason (Boston U) Parental Judgments of Children’s Language Abilities
2:30
Break
3:00
3:30
Susanne Tavolato (U Mass) Children’s Comprehension of Pronominal Subjects & Discourse Function of Pronouns in Complicated Sentences
4:00
Philip Lieberman, Robert Buhr, Suzanne Hamby, Karen Landahl & Patricia Keeling (Brown U) Development of Vowel Production in Infants

LANGUAGE ACQUISITION
Salon F
Chair: Joseph A. Palma
2:00
Marilyn Shatz (CUNY) Form & Intent: Mothers’ Questions to Children
2:30
Catherine J. Garvey (Johns Hopkins U) Some Ways of Asking Conversational Repair Questions
3:00
Jean-Berko Gleason (Boston U) Parental Judgments of Children’s Language Abilities
3:30
Break
4:00
4:30
Susanne Tavolato (U Mass) Children’s Comprehension of Pronominal Subjects & Discourse Function of Pronouns in Complicated Sentences
5:00
Philip Lieberman, Robert Buhr, Suzanne Hamby, Karen Landahl & Patricia Keeling (Brown U) Development of Vowel Production in Infants

PHONOLOGY
Salon J
Chair: Karl V. Teeter
1:00
James W. Harris (MIT) How Abstract is Natural Phonology?
1:30
Margaret Reese Allen (U Connecticut) The Structure of English Compound Nominals
2:00
Stephen Wallace (Cornell U) Interplay of Voice, Aspect & Mode: The Semantics of Noun-Verb Combinations in Malay
2:30
Luare Watkins (U Kansas) Shape vs. Position: Classifier Nominals in North America
3:00
Joan Manes (U Virginia) A Classification of Semantic Relationships in English American English Folk Description
3:30
Jay Pollack (U Texas) On the Altered Differences Between Word Formation Rules & Lexical Redundancy Rules

ISSUCE ANALYSIS Salon K
Chair: Susumu Kuno
1:00
1:30
Alessandro Duranti (U Rome & USC) & Elonor Keenan (UCC) The Organization of Reference in Italian Conversation
2:00
Robert Kantor (Ohio State U) Discourse Connection & Demonstratives
2:30
Break
3:00
D. Robert Ladus, Jr. (Cornell U) Intonation is a MCP
3:30
Helmut Esau (Texas A&M & U Mervin Barnes (U Oklahoma) English Prosody Reconsidered

WEDNESDAY, 29 DECEMBER 1976

2:00-5:30 PM ISA Business Meeting
Chair: Milton W. Wallis
The following rules for motions and resolutions were prepared by William James and approved by the Executive Committee at its June 1973 meeting. ISA members are urged to bring to the floor any questions or concerns about the new rules and resolutions considered at the Business Meeting.

Members wishing to propose motions under 2.d. (below) should initiate such actions through the Executive Committee prior to the Business Meeting. This may be accomplished by sending motions to the ISA Secretariat for inclusion in the draft of the Executive Committee agenda prior to the 27 December 1976 meeting. Resolutions may be introduced by contacting a member of the Resolutions Committee prior to the Business Meeting.

RESOLVES FOR MOTIONS & RESOLUTIONS
Ground Rules for Motions and Resolutions
1. Definitions. A motion is any proposition calling for action whether by an officer of the Society, the Executive Committee or the members. A resolution expresses the opinion or feeling of a group. Resolutions are either (a) resolutions expressing "the sense of the majority of the meeting," and (b) resolutions expressing "the sense of the majority of the membership.

2. Procedure regarding motions. a. Motions are in order only at the annual business meeting, unless restricted to members of the Society, motions may be initiated by the Executive Committee or by any member of the Society. b. Motions initiated by the Executive Committee must be considered by the Executive Committee prior to their consideration by the Society. Motions initiated from the floor, if they receive affirmative vote of a majority of members voting at the meeting, are then to be submitted to the Executive Committee for a ballot of the membership of the Society in the next issue of the ISA Bulletin. Passage requires: (a) a majority of the voting members voting in favor and (b) a majority of those voting in favor. 2.d. If a member wishes to introduce a motion, but prefers to avoid the discussion involved in doing so, he may submit his motion in advance to the Executive Committee (before their regular meeting preceding the business meeting at which the motion is to be introduced) with a request that the Executive Committee consider the motion at the regular meeting of the Society and present the business meeting at a notice issued by the Executive Committee in connection with the meeting. The resolution Committee shall determine whether the sense of the majority of the meeting requires for its passage the affirmative vote of a majority of the members voting at the meeting.

3. Procedure regarding resolutions. a. Resolutions may be introduced at any meeting of the Society, but only at regular meetings, it is strongly recommended that a resolution be introduced at any regular or special meeting. Any member wishing to introduce a resolution must submit it in writing to the Resolutions Committee, which, in addition to its regular duty of formulating resolutions, may also function as an ad hoc committee to make sure that the language is clear, and that duplication is avoided. The Resolutions Committee may send a letter in advance of this purpose. If it should be necessary to receive during the course of the meeting.

4.45 PM Presidential Address: "Proposed Meaning"
6:15-7:45 PM Wine & Cheese Reception
### MORNING

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Chair</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>9:00</td>
<td>SEMANTICS</td>
<td>Larry R. Horn</td>
<td>Robert Rodman, Rita Nolan &amp; Stanley Munsat (U North Carolina) Some Remarks on Pragmatics &amp; Presupposition</td>
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<tr>
<td>9:30</td>
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<td></td>
<td>James E. Hoard (U Oregon) Dr. Livingstone, I Presuppose</td>
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<td>10:00</td>
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<td>Celia Merrill (U Texas) Truth, Meaning &amp; the Paraphrased Performatif</td>
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<td>10:30</td>
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<td>Alice Davison (SUNY Stony Brook) Negative Scope &amp; Negative Indefinites in an OV Language</td>
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<td>11:00</td>
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<td>Frank Roberts Brandon (UNICAMP) Grammatical Relations and Scope</td>
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<td>11:30</td>
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<td>Per Kristian Halvorsen (U Texas) Transformational Syntax &amp; Model Theoretic Semantics for Pseudo-Clefts</td>
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### PSYCHOLINGUISTICS I

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<tr>
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<th>Session</th>
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<th>Speaker(s)</th>
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<tbody>
<tr>
<td>9:00</td>
<td></td>
<td>Victoria A. Fromkin</td>
<td>Glenn Frankenstein (U Maine) Language Out of Context: Schizophrenia</td>
</tr>
<tr>
<td>9:30</td>
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<td></td>
<td>Wolfgang U. Dressler (U Vienna) Morphophonological Disturbances in Aphasia</td>
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<td>10:00</td>
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<td>Maryls McClaran (UCLA) Lateralization Studies, Language &amp; the Social Sciences</td>
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<td>10:15</td>
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<td>Break</td>
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<tr>
<td>10:30</td>
<td></td>
<td></td>
<td>Susan L. Donald (U Connecticut &amp; Haskins Laboratories) Selective Adaptation of Labial Stops for Thai &amp; English Speakers</td>
</tr>
<tr>
<td>11:00</td>
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<td></td>
<td>D.W. Bearholt &amp; G. Valdes-Falls (New Mexico State U) Toward a Probabilistic Automata Model of Some Aspects of Code-Switching</td>
</tr>
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<td>11:30</td>
<td></td>
<td></td>
<td>Sarah Grey Thomson (U Pittsburgh) On Interpreting &quot;The Indian Interpreter&quot;</td>
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### PHONOLOGY III

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<tr>
<th>Time</th>
<th>Session</th>
<th>Chair</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>9:00</td>
<td></td>
<td>Charles E. Casimir</td>
<td>John T. Jensen (U Ottawa) Reply to &quot;Theoretical Implications of Hungarian Vowel Harmony&quot;</td>
</tr>
<tr>
<td>9:30</td>
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<td></td>
<td>Peter C. Bjorkman (George Mason U) Weakening Chains &amp; the Histories of Some Spanish Consonants</td>
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<td>10:00</td>
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<td></td>
<td>T.D. Griffen (Wichita State U) Middle High German, a Volcing Language</td>
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<td>10:15</td>
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<td>Break</td>
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<td>10:30</td>
<td></td>
<td></td>
<td>Marianne M. Williams (SUNY) Levels of Consciousness of Linguistic Structure</td>
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<td>11:00</td>
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<td>Larry Nessly, J. On the Word Stress Cycle in English</td>
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<td>11:30</td>
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<td>Robert Rankin (U Kansas) The Unmarking of Ouapaw Phonology: A Study of Language Death</td>
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### AFTERNOON

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<tbody>
<tr>
<td>2:00</td>
<td>SOCIOLINGUISTICS</td>
<td>Gillian Sankoff</td>
<td>Crawford Feagin, Southern White English: The Changing Verb Phrase</td>
</tr>
<tr>
<td>2:30</td>
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<td></td>
<td>John Baugh (U Pennsylvania) The State of 'Steady': Aspectual Marking in Black English</td>
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<tr>
<td>3:00</td>
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<td></td>
<td>Patricia Tway (Woodmere) Social Stratification &amp; Linguistic Forms of Factory Workers</td>
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<td>3:30</td>
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<td>Veda Charrow &amp; Robert Charrow (Center for Applied Linguistics &amp; Howard U Low School) Investigating Comprehension in Real World Tasks: Understanding Jury Instructions</td>
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<tr>
<td>4:00</td>
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<td></td>
<td>William Washabaugh (U Wisconsin) James Woodward &amp; Susan DeSantis (Gallaudet) Providence Island Sign Language</td>
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<td>4:30</td>
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<td></td>
<td>James Woodward &amp; Susan DeSantis (Gallaudet C) Negative Incorporation in FSL &amp; ASL</td>
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### INDO-EUROPEAN II

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<tr>
<td>2:00</td>
<td></td>
<td>Calvert Watkins</td>
<td>Anatoly Liberman (U Minnesota) Gothic Atapu Old High German Erdo</td>
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<td>2:30</td>
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<td>Peter Gam, Proto-Germanic Root-final Voiceless Stops with Secondary Manner of Articulation</td>
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<td>3:00</td>
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<td>Warren Cowgill (Yale U) Latin vis 'thou wilt' &amp; the Power of Morphology to Affect Phonology</td>
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<td>3:30</td>
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<td>John Vigorita (Cornell U) The Vedic Trochaic Gāyatī</td>
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<td>4:00</td>
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<td>Jared S. Klein (U Georgia) Anaphora, Deixis &amp; Relativization in the Rigveda</td>
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<td>4:30</td>
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<td>Robert Kantor &amp; Robert Jeffers (Ohio U) A History of the Sanskrit Gāyatī</td>
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**abstracts**
The Structure of English Compound Nominals

The structure of English compound nominals is investigated in this paper within a framework of derivational morphology similar to that proposed by Aronoff (1974) and by Siegel (1974). It is claimed that only such a theory permits an explanation of the phonological and semantic variance exhibited by compounds. Previous analyses have been either transformational (Lees, 1960) or descriptive (Marchand, 1969). It is argued here that transformational rules cannot be used to derive compounds, and that the variance shown by compounds is a natural consequence if a morphological derivation is assumed. Some of the evidence for variance in structure involves: 1) consonant changes which may occur at the internal boundary and 2) vowel reduction in the second element of the compound, for example:

1) peep-ke - peep-ke cleaner 2) wood-l/nd - bear-l/nd paper-piece straw-l/nd - field-l/nd

1am-post - 1am-paint fire-m/a - tax-m/a

It is shown that an analysis using re-adjustment rules to delete an internal word boundary (e.g. Selkirk, 1972) is insufficient when it fails to capture the fact that the pattern of phonological variance is mirrored by a variation in the semantic transparency of the compound [X-Y] with respect to its elements [X] and [Y]. The alignment of the phonological and semantic facts can best be accounted for by proposing underlying forms which differ in boundaries and bracketing. The following are proposed as examples of three types of compounds, derived by three different morphological operations:

1) [X(X#)][Y][Z]
2) [X][Y][Z][X]
3) [X][Y][Z][X]

Type 1 is non-idiosyncratic both in form and in meaning. Phonological disturbances do not occur at the juncture and the meaning of the compound is a function of the meaning of its elements. The second elements of type 2 compounds have representations similar to the stress-neutral suffixes such as -ness, -ful, -er, and they share some characteristics of these suffixes. Type 3 compounds have a weakened internal boundary which permits the operation of assimilation rules and predicts a low degree of semantic transparency. Implicit in the proposals made here is the position that morphological representations must be constrained in explicit ways, for example, as suggested in Braze's (1974) Natural Bracketing Hypothesis. The data from compounds provides some support for the strong version of Braze's hypothesis.

References

A Reanalysis of the Origin of Definite Adjectives in Baltic and Slavic

W.P. Lehmann in his book Proto-Indo-European Syntax and in an article in Donum Balticum has claimed that definite adjectives in Baltic and Slavic are syntactic archaism developed at a time when Baltic and Slavic were SOV languages, which according to his analysis they should have been at the time of the breakup of the Proto-Indo-European speech community. In this paper I will show that internal evidence from Baltic and Slavic motivates a different explanation of the origin of definite adjectives which does not imply contemporaneous SOV order at all. The crux of Lehmann's argument is that the definite adjective--etymologically an adjective with a fused postposed demonstrative (Type II)--developed directly from a relative clause positioned before the restricted noun with a clause final relative marker, a pattern typologically associated with SOV languages.

A further look at the data, however, motivates a different explanation. The primary shortcoming of Lehmann's analysis is that the supposedly erstwhile relative marker, rather than appearing in last position among elements of the putative original relative clause, stands in second position in the noun phrase: When two adjectives are conjoined in early Slavic texts the j-marked follows the first adjective, not second. Moreover, in Old Lithuanian for definite adjectives derived from verbs with prefixes the j-marker is placed between the prefix and the stem of the adjective, not at the end of the adjective:

praššukusioi (= pra-ja-ššukusioj = Mod. Lith. praššukusioj)

Phonological factors also pose problems for Lehmann's analysis. The resultant shape of definite adjectives in Baltic and Slavic seems to require a relatively late fusion of adjective and demonstrative, while under Lehmann's analysis definite adjectives should have developed quite early in the history of these languages.

I will demonstrate that the source construction of the Baltic and Slavic definite adjective is not one lost in the primordial days of these families, but rather one parallel to one still extant in parts of the Slavic world. In North Russian dialects a particle t- (derived from another demonstrative) is placed in second position in NP's as a marker of definiteness:

zižia-ta žena/ žena-ta zižia "evil woman"

The definite adjective resulted from this construction when the criticized definite marker (the earlier one, j-) became restricted to adjectives and subsequently became reinterpreted as an adjectival desinence.


The State of 'steady': Aspectual Marking in Black English

Descriptions of the Black English vernacular (BEV) have become increasigly important to analyses of English in general. Most notably, aspectual marking is a construction that is unique to BEV, and the identification of 'steady' will further advance our understanding of structural relations between SE and BEV. The present discussion will continue in this tradition by presenting the status of 'steady' as an aspectual marker in BEV. This reseach is significant for the following reasons: 1) 'steady' is a construction that is unique to BEV, 2) the identification of 'steady' will further advance our understanding of structural relations between SE and BEV, and 3) the nature of 'steady' is such that these findings are directly related to important issues in both BEV and SE.

'steady' typically occurs in word constructions like 'He's steady running' or 'He's steady mowing the lawn'. The noteworthy exception has been observed with prepositions following 'steady', for example, "You just steady on everybody's case". Used in the preceding manner, 'steady' is a continuous form, however, it can be distinguished from 'always' because it also conveys a sense of persistence and consistency which is not necessarily implicit with 'always'. Compare: 'He always running with somebody' vs. 'He steady running with somebody'. The significance of 'steady' was first noted by BEV corpora from Philadelphia and Los Angeles being examined for cases of distributive 'be' (Sasold 1972). Once the colloquial status of 'steady' had been identified, questionnaires were designed that manipulated these structures with regard to tense (e.g. He's steady running, He's been steady running) and tested the relative acceptability of several progressive and stative verbs. In addition, 'always' was substituted for 'steady' in every instance as a point of comparison.

SAMPLE QUESTIONNAIRE SENTENCES

As go be steady running, go be steady knowing the truth. He was steady running. He was steady knowing the truth.

Ricky steady be hitting somebody. Ricky always be hitting somebody.

Ricky steady be running. Ricky always be running.

Pat steady feeling the blues. Pat always feeling the blues.

The baby steady under the table. The baby always under the table.

45 questionnaires were given to BEV informants in Los Angeles and 39 were given to BEV speakers in Philadelphia. A four point scale of acceptability was employed in both cities. An additional 25 questionnaires were given to SE volunteers for comparative purposes. The results of the questionnaires will comprise the basis of this discussion. The initial findings indicate that habitual and durative verbs are most acceptable with 'steady'. Iterative verbs show marginal acceptability since stative verbs are unacceptable with rare exceptions like 'never' and 'hardly'. Furthermore, these findings are directly related to the distinguished research on 'be' by Lasad, Sasold and others. The results also have support some of the issues raised by Sasold on his work with progressives and statives.


Weakening Chains and the Histories of Some Spanish Consonants

James Foley contends that there are types of assimilations which are not phonetic in nature and therefore must be given purely phonological interpretations. Palatalization of /s/ before dental lips is found in languages with before dental nasals in Norwegian is cited by Foley as one example. Here the phonological interpretation apparent to Foley is that /s/ is strengthened in proximity to the stronger /l/ but not in the vicinity of weaker /l/. More recent work by Joan Hooper supports a theory of Natural Generative Phonology in part on the basis of the apparent evidence for a system of phonological constraints in standard Spanish dialects. In Hooper’s 1973 UCLA dissertation, the syllable is selected as the basic unit for stating such phonological constraints which are restrictions on the sequences of consonants clustering around a nucleus and which are non-additive in terms of rankings along a scale of relative phonological strengths. Hooper’s Positive Condition on syllable structure is similar in conception though not in detail to the notion of strength conditions advanced by the work of Foley. Relying on data from standard American dialects of Spanish, especially the Miami Cuban dialect of Spanish, this paper will present evidence that neither Foley’s nor Hooper’s approach to phonological constraints between segments, especially as these function within the syllable as a basic unit.

This paper is primarily concerned with motivating the concept of “phonetic” strength chains as an alternative to Foley’s innovative but still unworkable system of purely “phonological” strengths. A starting point will be to demonstrate that some of the phenomena Foley cites as crucial examples from Germanic (e.g. the retention of schwa after dentaI in 3rd. person singular verbs) or monophthonization of /au/ to /a/ before dentals) and as being fully “uninterpretable in a phonetic system” indeed do have a natural phonetic explanation within a system of Natural Phonology as proposed by David Stamper. A larger issue will be a claim here that a developing theory of strength chains based on pure phonetics (i.e. articulatory or acoustical simplification) is sufficiently capable of explaining a wide range of the segmental hierarchies which are part of Foley and Hooper, along with other synchronic as well as diachronic phenomena.

The argument advanced here is based largely on a notion of weakening chains or target chains in Natural Phonology, a concept first applied by Larry Neslansky (1973 C.C.S. Conference) and a direct outgrowth of the theory of Natural Phonology being advanced piecemeal by Stanum phonologists. This paper makes three controversial claims: (1) Foley’s purely phonological scales of relative strength have little if any empirical support and are, in fact, repeatedly contradicted by the evidence from Spanish; (2) the purportedly phonological and phonetic consonantal strength hierarchies which are part of Foley’s system of Natural Generative Phonology err primarily in her assumption that positions of phonological strength are storable exclusively or even prominently in terms of the syllable; and (3) the phonetic weakening chains suggested originally by Neslansky provide the most desirable account of relative phonological strengths of segments as well as the most supportable explanations for linguistic change. A consideration of Hooper’s arguments and the Spanish data on which they are based reveals that Natural Generative Phonology fails to handle with its Positive Syllable Structure Condition a necessary distinction between syllable-initial and word-initial positions as conditioning factors on synchronic phonological processes. Diachronic developments in the historical evolution of Spanish grammar are also cited as relevant.

Definite Articles and Referentiality

Articles seem to appear at a stage when a language which used word order to mark topic and comment or definiteness and indefiniteness begins to rely on word order to show grammatical relationships. In general, articles distinguish definite and indefinite nouns and thus also indicate old and new information. This paper will show how referentiality is marked by the presence of absence of articles at this stage, and it will also discuss the importance of marking referentiality in such languages.

In Latin there was no overt marker for indefinite NPs. The following examples from Veres (Marie de France, about 1140) show how the referential-nonreferential distinction functions in Old French indefinites:

(1a) En Bretaigne manoit jadis Une riches hom...
   "In Brittany lived formerly A rich man,..."
(1b) De Caruinet fu aavos Et du pais sire clames...
   "Of Caruinet[ he was overlord And of the country lord[ he was called,..."
(2a) Por ce qu’il ot bon eritage Fune prist por enfans avoir...
   "Because he had good background Wife took to children have...
(2b) De haute gent fui la muckle...qui au riche home fu donee...
   "Of high rank was the girl[ who to the rich man was given.

In (1a) the indefinite article introduces the lord to the discourse and after this the speaker can refer to him with a pronoun (expressed by verb form only in (1b) and independently expressed in (2a)) or a definite noun phrase. The NPs, on the other hand, has not been properly introduced into the discourse with an article (2a), and when mentioned a few lines later (2b) must be further identified by a relative clause.

In Mandarin, where word order is used to mark topic and comment as well as definiteness and indefiniteness of NPs (Li and Thompson, 1975 and 1976), the difference between referential and nonreferential indefinite nouns is often shown by word order.

(3a) Pao-le yi-ge sei.
   "This one-cl. thief.
(3b) You yi-ge sei pao-le.
   "That one-cl. thief run-aspec."
On Surface Phonetic Constraints in Fast Speech

The purpose of this paper is to show that the emergence of surface phonetic constraints (SPC's) in fast speech are not found in normal speech, and the frequent relaxing of normal speech SPC's in fast speech, constitute a problem for Natural Generative Phonology (NGP) with its single level analysis and no-ordering condition. For instance, in Modern Hebrew fast speech, obstruct clusters must be uniform in voicing, but NGP provides no way of excluding this constraint from applying in normal speech as well (where it should not apply). Similarly, though Modern Hebrew does not allow stem-gemination in normal speech, this restriction is often violated in fast speech and must thus be excluded from it. The problem is further complicated by the gradual change affecting SPC's with the increase of speech tempo; Attempts to resolve this difficulty by means of discerning a number of discrete levels of fast speech (cf. Rudez 1976 "Lexical Representations and Variable Rules in NGP") are rejected for the lack of independent evidence. It is proposed that a separate level of fast speech is indeed inevitable, but that within fast speech, the ordering of rules and development of constraints are predictable from the change in tempo on universal grounds. For instance, in normal speech, Modern Hebrew sonorant consonants must be flanked by a vowel or at least one side; in fast speech liquids and nasals may occur in (C-)position provided that they are syllabified; in faster speech they may be de syllabified in the same position; and at an even faster tempo the liquid or nasal may sometimes be deleted. It will be shown that this sort of development is predictable by general principles, and that to assume discrete levels of fast speech would be an indirect and unnatural way of capturing this predictability.

(1) The greater the incompatibility of sequences with an existing language-particular constraint, the less likely are the constraints to be violated; e.g. a constraint on CVC clusters will be easier to violate in a European language than in Japanese.

(2) The greater the violation of universal constraints on syllable-structure (as in Hooper's 1973 dissertation), the less likely are the constraints to be relaxed; e.g. a constraint on syllable-initial glide followed by a consonant is less likely to be violated than a constraint on syllable-initial nasals followed by a consonant. Hooper's (1976 "Constraints on Schade's Deletion in American English") interpretation of Zwicky's (1973) English data in "Note on a Phonological Hierarchy in English" is discussed in this context.

For constraints found in fast speech only, it is proposed that:

(1) The faster the tempo of speech, the greater the likelihood of restructuring clusters to ones that are assimilated in some way; e.g. the above-mentioned restriction on obstruct clusters in Modern Hebrew.

(2) The faster the tempo, the more likely are the restrictions on the occurrence of weak elements; e.g. certain restrictions on sequences of unstressed vowels in Modern Hebrew.

Once such general principles are properly defined, it should be possible to predict the development of SPC's in fast speech without assuming distinct levels within fast speech.

Scope of quantifiers and negation has been discussed for several years now, particularly by Carden, Lakoff, and Jackendoff. All have assumed to some extent that scope is determined by some simple S by precedence (left-to-right order). In this paper, it will be shown that surface grammatical relations are a strong determinant of scope than precedence in simple Ssj sentences. The relevant surface relations are: (where => means contains in its scope) Subject => Aux(Cop) => Main Predicate => Object. Evidence will be presented from movement rules which operate in step 1 and from OV languages.

In Spanish, Subject may be postposed without changing scope:

**Muchas cartas** no llegaron.

**Many letters** not arrived.

In Dutch, the negated Main Pred can be moved around a quantified Object without altering scope relationships:

Myn briefen waren niet beantwoord door veel mensen.

My letters were not answered by many people.

In Portuguese, Subject may be postposed and Main Pred preposed around AUX(COP) without changing scope:

Muitos não são os grandes nomes da quimica moderna. (=few)

The great names of modern chemistry are not many. (=few)

Once such general principles are properly defined, it should be possible to predict the development of SPC's in fast speech without assuming distinct levels within fast speech.

**Note:** All behaves differently syntactically and semantically from many (cf. Carden English Quantifiers).

In contrast, surface grammatical relations play a more important part in determining scope than precedence. This permits the reformulation of rules and constraints concerned with scope and predicts that word order change in languages should preserve scope relations (which would seem to be borne out by a comparison of Bengali and Japanese) and to 7 SVO IE languages should be of use in historical work. The conclusion also strengthens the position of Perlmutter and Pastol that grammatical relations are important to the statement of rules, since movement rules - by different constraints when applying to grammatical categories (as defined here) than when moving lexical items.
English Vowel Alternation Is Psychologically Real

English vowel alternation was subjected to an experimental test for psychological reality. It is assumed that a linguistic generalization is psychologically real if it serves as a variable in mental processing. It was hypothesized that if the pattern of vowel alternations in English facilitates the learning of novel forms exemplifying correct English alternations and if it interferes in the learning of novel forms exemplifying alternations not found in English, then it is psychologically real.

The alternations were embedded in novel adjective-noun pairs, e.g., the correct ay/I alternation in the pair subk[ay]pe/subk[I]pity. Corresponding to each correct exemplar, four word-pairs with non-English alternations served as control conditions; thus, the controls for the ay/I alternation were: mulp[ay]de/mulp[ay]pity, purg[ay]te/purg[ay]tity, surf[ay]me/surf[ay]mity, dis- r[ay]ne/dis[ay]nity. There were, therefore, 25 stimulus pairs. The word pairs were presented audially to 20 university students as paired-associates to be learned, using the study-test technique. In the study phase, subjects heard and repeated all 25 word pairs. In the test phase, they were presented with only the adjective forms, and the task consisted in supplying the noun forms.

The results showed that, in all three learnability indices used, the class of correct English alternations were learned significantly more readily than the class of non-English alternations, and, furthermore, that knowledge of these correct English alternations interfered in the learning of the non-English alternations. It was concluded that the vowel alternation generalization in English is psychologically real.

In an attempt to reconcile the positive results of the present experiment with the negative results of two previous productivity studies on English vowel alternation, a distinction is proposed between psychological reality and productivity, whereby a productive process is considered to be necessarily psychologically real, but that a psychologically real process need not be productive. Thus, English vowel alternation is psychologically real, and will be shown to be so in psychological reality experiments; however, productivity tests will reveal that it is not productive. A scale of "psychological productivity" is proposed; in this scale, surface phonetic processes would rate high, and purely morphological, non-phonetically conditioned processes would gravitate toward the lower end.
Phonological Coalescence

Coalescence processes are those which affect two or more segments, modifying both or else deleting one and modifying the other. Such processes are commonplace and particularly characteristic of rapid and informal speech (cf. English can't + [kæt]). They share as a common property the fact that the resulting segment (or segments) is typically an articulatory “blend” of the original segments. Why should this be so?

In attempting to answer this question two theoretical treatments of coalescence are examined. Standard generative phonology allows rules to operate only upon phonemic segments; thus a rule defined upon a certain feature (or feature complex) applies to the entire phoneme characterized by that feature (or complex). Within this framework, coalescence processes are treated in terms of transformational rules applying to two (or more) phonemes characterized by the features mentioned in the structural description of the rule. The second approach, that of autosegmental phonology (Goldsmith 1976a, 1976b, Clements 1976) takes the feature, rather than the phoneme, as the basic unit of phonological description. It treats coalescence processes in terms of operations defined directly upon features themselves. Two such operations are posited to account for coalescence: feature deletion and feature metathesis. These are shown to account for a variety of mutual adaptation, fusion and interversion processes in a number of languages including Ga, Mongolian, Catalan, Dakota, and Icelandic.

The properties of the two descriptive models are contrasted. The transformational format is unable to distinguish in a principled way between the “natural” coalescence processes that "blend" phonemic segments from the "unnatural" coalescence processes that do not. On the other hand, the autosegmental approach draws this distinction sharply. In its terms, coalescence processes are just those that result from the metathesis and deletion of features; hence, no new features are added to representations, and the forms which result are of necessity simplifications (blends) of the original forms.

The Grammatical Role of the Causes in Universal Grammar

Over the last ten years two major approaches to syntax have been prominent in generative grammar: autonomous syntax & semantically based syntax. The former approach is most frequently associated with the recent work of Chomsky and colleagues, but it also characterizes work in Relational Grammar developed in various forms by Perlmutter, Postal, Johnson, Keenan & Comrie inter alia. The semantically based approach to syntax is exemplified in the work of Fillmore, Glovin, Morgan, McCawley & others. This paper is a crosslinguistic study of causativism, the purpose of which is to compare the role of autonomous syntax and semantics with respect to a major problem in the syntax of clause union (CU) causatives. The problem is the following: What factors determine the derived grammatical role (grammatical relation/case) of the cause (or underlying complement subject (UCS) in such causatives? A wide variety of surface outputs (see below) are possible in different languages. Are there any valid crosslinguistic generalizations?

It has been widely noted (Aissen, Comrie, Perlmuter & Postal) that in many languages the complement subjects (CSs) of transitive verbs appear as indirect objects. This has led to the hypothesis that the surface grammatical role of the cause is determined by the purely grammatical factor of transitivity. There are, however, a wide variety of counter examples to this hypothesis: e.g. in Japanese intransitive CSs may be marked accusative (-o) or dative-ergative (-ni); in Bolivian Quechua transitive CSs may be marked accusative (-ti), dative (-um) or instrumental (-wan). Similar facts are found in other languages. And, significantly, the choice of grammatical role is determined along a single semantic parameter --- that of agency --- in all known cases. Thus, it is proposed that the determining factor is fundamentally semantic. The grammatical role of the UCS serves to indicate the degree of agentiveness (or CONTROL) specified by the UCS. If the UCS is viewed as agentive, the cause is marked as such by receiving a grammatical role in derived structure appropriate to agents: agentive or animate (potential agent). If, however, the UCS is viewed as a patient, a grammatical role appropriate to patienthood such as direct object is assigned. Some languages in which this seems quite clear to be the case are Hungarian, Japanese, Kannada, Modern Hebrew & Quechua.

An explanation for the significance of transitivity noted by Aissen, Comrie, Perlmuter & Postal (see above) suggests itself. In many languages the semantic determination of the grammatical role of the causes undergoes GRAMMATICALIZATION. That is, the semantic principle of agency is generalized grammatically and hence loses its semantic import. Because transitive subjects typically are agentive, all transitive subjects come to receive agentive (e.g. dative or instrumental) case regardless of their semantic function. Similarly, intransitive subjects are typically non-agentive. Thus, all intransitive CSs may come to be marked invariably as patients (e.g. accusative). As a result of grammaticalization, the derived role of the cause may come to be determined by transitivity rather than by agency.

In addition to presenting crosslinguistic evidence for the above claims, factors encouraging grammaticalization will be discussed if time permits.
Latin vis "thou wilt", and the Power of Morphology to Affect Phonology

This paper presents a solution for a detail of Latin historical grammar with implications for the power of morphology to affect phonology, and exemplifies a sound law applying to just one item. New forms of Latin vis ("I will") come clearly from an athematic root present *vel-*, with cognates of same or similar meaning in Germanic, Balto-Mar veo *vel-, and Indo-Iranian. But the 2d singular present indicative veo ("you will") is very aberrant in shape, and, since W.Froehde, Bezzler-Beltracchi 6167, 6168, Detlev Schmid-Rheinisches Museum 56 (1881), has mostly been thought to come from a different root, *vele- or *vele-, seen in Vedic सळ तु ("thou turnest upon thee"), establishing, by W.F. Schmidt, Melanges... Rebus (1986) 613-524.

But there is no need to posit this suppletion if we consider sufficiently the outcome of *veli*-s 2d singular, *vel*-s. It is widely accepted that the Latin conjunction vel 'or' is the regular outcome of this *veli*- through *vel > vel > vel*, and that veo reflects a replacement for vel in its primary function as a 2d singular verb form, veo being no longer clearly recognizable as such because it did not end in *-s*. I suggest that the replacement consisted not in suppletion by vel, but in resyllabification of *vel-* giving *veo*. This form was phonologically unique in having a long vowel, front *i* before *a*; Early Latin 1 before a consonant other than itself was otherwise velar, as shown by the backing of the preceding vowel in forms like puleus, past participle of pelle ("I drive") and the cluster *ll* normally occurring only between vowels. This unique combination of (long) *i* plus *a* in veo did not remain, but instead underwent a unique sound change, i.e., a combination frequent in Old Lat, and comparable e.g. to the regular development of palatal *j* to *i* in all positions in standard Modern French. The development of Old Latin *velae* (quasi-attested in Frisian 9.6) to Classical Latin vis is quite regular.

This explanation is in some respects anticipated by N. Gyssens, Uber Aussprache, Vokalismand Betonung der lateinischen Sproache 2 (1870) 27ff., and by F. Eichler, Rheinisches Museum 36 (1881) 249, who is followed by at least 6 other scholars, of whom the most recent that I have noted is F. Pinna, Grammatica latina storica a comparativa 2 (1952) 249. But Gyssens derives veo by a sporadic loss (1) of *a* in veo, and Eichler et al. derive veo (allegedly attested in the very early Duense inscription) from veo by an ed hoc and phonetically unlikely change of velar *w* before a vowel. If my explanation of veo is correct, it is a case where morphological patterning has caused a previously non-existing sound combination—(long) *i* plus *w*—to arise, and some evidence that when the resulting combination is very acentual and very limited in lexical distribution, it is liable to be replaced soon by a combination that conforms to existing patterns.

By view, if accepted, also rules out all possibility that the letters VEOL on the Duense inscription are an early form of vis ("thou wilt"). which in turn reduces to almost zero the likelihood that the preceding letters PPOUL are a passive-deponent indicative, with an ending containing IF or an inexplicably early example of *s* from *se.*
Toward a Probabilistic Automata Model of Some Aspects of Code-Switching

Specific interest in code-switching is almost entirely limited to the last 15 years, and has included research primarily in the alternating use of Swahili and English, Greek and English, Hindi and Punjabi, two dialects of Norwegian, German and English, Spanish and English, Yiddish and English, and secondarily between several other pairs of languages. Among the list of poorly understood phenomena in code-switching are (1) seemingly unpredictable switching, and (2) the possibility of formal, complex rules underlying different code-switching patterns. It is these open questions which modeling might illuminate.

During the past decade, probabilistic automata have been used to model many aspects of nondeterministic, intelligent behavior (Paz, 1971; Narendra and Thathachar, 1974). Thus it is natural to try to model code-switching with probabilistic automata in an attempt to improve our understanding of code-switching and its relation to language use and intelligence. The model presented in this paper will provide guidance for quantification, and allow comparisons between patterns of actual code-switching and code-switching as generated by the model. As is usual in modeling, inconsistencies are expected to provide guidance for further refinement of the theory and development of the model.

Assumptions used in designing the model at its present state of development are (1) that context-invariant "chunks" of information delineate important boundaries in the synthesis of speech (motivated to some extent by Miller, 1967, "The Magical Number Seven"); (2) that a bilingual's choice of language can be modeled by a regular grammar; (3) that the context of a discourse can be encoded into a finite string; (4) that the context string as encoded largely determines the state of the probabilistic automaton, and thereby also determines the set of probabilities used to choose a language; and (5) that the probabilities of switching words, phrases, and sentences can be measured with reasonable accuracy for different types of bilinguals (Valdes-Fallis, 1974, LSA paper). Goals of the model at this stage of development are (1) to clarify code-switching for lexical need, (2) to clarify apparently random code-switching, (3) to clarify the dependency of code-switching upon context, and (4) to provide a vehicle for further refinement in the theoretical development of this complex process.
This paper proposes to discuss the following points: 1) that Thorstein Veblen (1857-1929) was a neglected pioneer in the sociology of language in America; 2) that the examination of such early (1899) and relatively isolated sociolinguistic commentary helps to identify and understand the conditions of mind which give rise to such analysis, and thus to provide some insight into the heightened interest in language and society and in recent years; 3) that Veblen's analysis, though still contemporary in many of its aspects, was out of the mainstream of the development of sociolinguistics. Veblen's sociolinguistic comment did not create a revolution as did his economic comment, nor did he participate in the continuity of development that has led in recent years to a formal linguistics sub-field speciality of the sociology of language. The paper concludes by commenting on this last point in terms of the problem of the opposition between revolution and continuity in the history of linguistic thought (Hymes 1974).

Veblen's initial commentary on sociolinguistics appears in his classic, The Theory of the Leisure Class (1899). Subsequently, he continued his concern in two anthropological essays (1913), and in a preface to his translation of an Icelandic saga (1925). Although these commentaries are brief, he does establish several "modern" and widely agreed upon premises on the nature of language and society: 1) the co-determination of language and society (1899, 1925), 2) the notion of sociolinguistic variability (1899), 3) the symbolic nature of language varieties (1899), 4) the notion of pidgination as a sociolinguistic process (1913), and 5) status and prestige as linguistic forces (1899, 1913).

Intellectually, Veblen was part of the movement which coalesced around the turn of the century and was marked by a philosophical attack on all formal systems of thought. Underlying Veblen's analysis was his assumption that people behave irrationally, his alienation, and his idealization of the scientific mind. Veblen was exceptional among the members of this movement in including language in his criticism of systems and formal abstractions. He was also exceptional in being a scholar of language and society outside the Boas-Bloomfield-Sapir continuum.

Veblen's isolation and lack of influence in the sociology of language rests in marked contrast to his enormous influence in other areas of social science. The reason for this is fixed in the absolutist, prescriptive, linguistic tradition shared by the educated, intelligent, but non-linguist audience that Veblen addressed. Brief connection is also made with Fishman's (1972) discussion of 'why the sociology of language has only recently begun to develop.' Finally, the data of this study would seem not to accord with the Kuhnian (1970) notion of the history of science, nor with the related historical theories regarding the role of revolutionary figures in the history of linguistics.
Resumptive Preverbal Deletion in IE?

Sequences of the form preV+V₁...+V₁ have been interpreted as results of an IE process of "resumptive" preverb deletion applied to underlying sequences of the form preV₁+V₁...+preV₁+V₁, in which the simplex retains the semantic force of the preceding compound verb. But we must be convinced of the necessity, not just of the possibility, of assuming such a construction before ascribing it to IE. To do this we collect all instances of the sequence preV₁+V₁...+V₁ in the RV, in the prose portions of the TS, and in the Iliad. First, we discard cases in which the "reduction" has an obviously metrical cause (e.g., RV 1.13.6). We next discard "intended oppositions", in which the semantic distinction between compound and simplex is the point of the whole passage, e.g., RV 5.46.9. In the remaining examples, we can detect no difference between compound and simplex: we must use parallel-passages to continue the investigation. To prove a simplex resumptive, 1. the compound must elsewhere occur in the same environment as the simplex (otherwise the deletion hypothesis is impossible to prove); 2. the simplex must not occur in the same environment (if it does, the deletion hypothesis is unnecessary: we are faced with a chance collocation). 5 passages (out of 56 of the formal type) in the RV, none (of 6) in the TS, and 11 (or 40) in the I. pass this double test. The Rigvedic examples are all objectionable for textual reasons, and all the evidence consists of compounds and simplex, which do not differ in meaning anyway: the strongest type of evidence for the theory is totally lacking. Their interpretation as chance collocations, a priori likely, is suggested by the existence, hitherto unnoticed, of sequences of the form V₁...+preV₁+V₁ (49X RV, 3X TS, 5X I.)). Thus even the very recurrence of the first type of sequence is no proof of the reality of "resumptive" preverb deletion. Finally, a hypothesis of an "any-order" preV deletion is disproven by the multitude of non-deleted sequences (preV₁+V₁...+preV₁+V₁): 29X RV, 31X TS, 46X I.).

If preverbal deletion was a living process in classical Greek, it seems to have been an innovation, since the oldest Greek and Ionic literary texts provide no evidence that it was inherited.

The Organization of Reference in Italian Conversation

This study is part of an on-going research project that examines differences between unplanned and planned discourse across the world's languages. Our primary focus here is the organization of reference in Italian conversation. We examine in particular 2 constructions characteristic of spontaneous conversation: left-(LD) and right-direction (RD). We document:

1. the syntactic role of the LD/RD coreferential pronoun: while co-referential pronouns of RD constituents function as subjects, indirect objects in the predicate, the syntactic roles of co-referential pronouns in LUs are more restricted. Whereas in English, a LD referent can be referred to within the predication itself by a coreferential pronominal subject; this is not the case in the Italian data: full pronoun subjects are optional and relatively infrequent. Coreferential subjects are implied through anaphors: la mano della finestra. (He) brought the window. In the form a full subject pronoun never appears following a dislocated NP (co-referential) and rarely appears preceding one. Thus it is difficult to distinguish between LD and subject-verb constructions on the one hand and RD and verb-subject constructions on the other. We consider such constructions as a category apart. However, we do not eliminate them from the study, as they appear in many of the same contexts as LD/RD.

2. the semantic and pragmatic role of LD/RD in discourse: In English, LD referents are typically definite but not given (Keenan & Schieffelin 1976).

This is the case in Italian for LD/RD as well: LD/RD are not used primarily for emphasis. Rather LD tends to be used to draw attention to a novel or re-introduced referent, and RD tends to be used as a means of clarifying the identity of a referent contained in the RD, a form of self-repair (Scheff, lect. notes) or afterthought (Hyman 1975). Further, a study of full subjects showed that they too are discourse-sent: Whereas 75% of the implied subjects are present in the preceding 2 clauses, 58% of LUs and 14% of VS full subjects appear as subjects within the preceding 2 clauses. Full referential subjects are used primarily to reintroduce a referent mentioned earlier but not in the immediate discourse history.

A closer look at the discourse shows that LD/RD referents, though generally discourse-relevant, are not closely tied to the semantic field of the discourse topic. The LD/RD referent is usually not the discourse topic itself but some sub-topic. For example, talking about cleaning, X comments "Per i vestiti, vado alla lavanderia. ("For clothes, (I) go to the laundry") ("LD). The semantic links "explain" in part the RD construction: The speaker may add that he cannot identify a referent, because of some semantic link with the discourse topic; but in the course of the utterance, the speaker may have second thoughts about the clarity of his expression.

3. the interactional role of LD/RD: On a semantic level, LD/RD appear as unplanned propositions. On an interactional level, they appear as planned constructions, eliminating gaps in the conversation. RD is often found in the environment of (sub-)topic closure and serves to draw attention to a new but related topic. The LD referent acts as a place-holder (co-occurring with 'cloze' 'voglio dire' 'ma'), allowing the speaker to occupy the floor while formulating a relevant prefication. RD facilitates the flow of conversation by anticipating misunderstanding about the identity of a referent and/or next speaker.


This paper will present evidence against Perlmutter's Shadow Pronoun Hypothesis (1972) - in particular, his explanation of apparent violations of the Complex NP Constraint (interpreted as a constraint on deletion) in Arabic to be due to a rule of Subject Pronoun Drop and not Shadow Deletion. Crucial to Perlmutter's account is the claim that pronoun drop rules are always optional and that they are insensitive to the structure in which the pronoun occurs. This enables him to relate the deletion of the pronoun in the complex NP in (1) below to the general rule that drops subject pronouns in Arabic as illustrated in (2).

1. da ilwalad; i'lli šuft il bINT; i'lli (huwwa); darab-ha;
   This is the boy that I saw the girl who hit her.
2. (huwwa) darab-ha;
   He hit her.

An investigation of the conditions under which subject pronouns are deleted in Arabic, however, does not support Perlmutter's claim. For example, subject pronouns are obligatorily deleted in a relative clause if the pronoun is coreferential to the head of the immediately dominating relative clause.

3. *da ilwalad; i'lli huwwa; darab il bINT.
   This is the boy who he hit the girl.
4. da ilwalad i'lli g darab il bINT.
   This is the boy who he hit the girl

Furthermore, there are cases where the pronoun cannot be deleted in a complex NP.

5. da ilwalad; i'lli šuft il raagl; i'lli huwwa; darab-u;
   This is the boy who I saw the man that he hit him.
6. *da ilwalad; i'lli šuft il raagl; i'lli g; darab-u;

Cases like these cannot be handled by Perlmutter's hypothesis since they show that the deletion of the subject pronoun in Arabic is controlled by the structure in which it occurs. Neither can they be handled by a Shadow Deletion Rule since this is sensitive to Island Constraints violated in (1).

The behavior of subject pronoun deletion in Arabic will be shown to follow from a more general principle of deletion in language - a principle that predicts that a pronoun cannot be deleted if the structure intervening between the pronoun and its antecedent includes another possible controller for that deletion. The application of this principle will be demonstrated with respect to Arabic and English deletion rules.

English Prosody Reconsidered

During the last ten years three major proposals have been advanced to formalize a theory of English metrics precise enough to be tested: Halle and Keyser (1965), Magnumson and Ryder (1970), and Kiparsky (1975). In this paper we wish to examine Kiparsky's (1975) proposal, who has demonstrated the inadequacy of earlier metrical theories, as presently formulated, and who insists that his proposal alone is adequate for a description of English verse.

Although Kiparsky's (K's) theory looks very attractive at first reading, a careful examination of the effects of his rules led us to seriously doubt the correctness of his theoretical framework. We shall focus here on three major shortcomings:

Firstly, K's rules are much too accommodating. By applying his rules to lines of randomly distributed stresses and intonation breaks, we demonstrate that his constraints are not sufficiently precise to provide an explanatory account of metrical possibilities in poetry. Yet even very little is excluded by K's rules, counterexamples still exist.

One set of such counterexamples was also noticed by K, who tries to explain them away by relying on such questionable arguments as shift of word stress (imprint → imprint) and the so-called Rhythm Rule, which K would presumably call upon to justify such obvious exceptions to his metrical rules as the following lines in Shakespeare:

1. Thy unus'd beauty must be tomb'd with thee. (Sonnet 4)
2. Than unsept stone, besmear'd with sluttish time. (Sonnet 55)

We do not wish to question the validity of the Rhythm Rule, at least for some modifier and noun sequences. But K does not indicate that the exceptions are found exactly in those categories where counterevidence to his relatively unconstrained rules could be expected. However, K's claim about the strength of his major constraint, the monosyllabic constraint, can be questioned on other grounds. K asserts that because of this constraint his theory—and his theory alone—can distinguish the following unmetrical pentameter lines from metrical ones:

3. Ode to the West Wind by Percy Bysshe Shelley.
4. Fly away! Fly away! You dangerous thing!

We have constructed the following similar lines so that they do not violate the monosyllabic constraint:

5. Ode to the West wind by Anne and Bysshe Shelley.
6. Fly back now! Fly back now! You dangerous thing!

Lines (5) and (6) seem to us no more acceptable than lines (1) and (4), and yet K would have to include the former as metrical but exclude the latter as unmetrical.

Secondly, K's only constraint on metrical rules is on the odd rather than the even position. This solution seems intuitively backward and would require extensive justification, particularly since Magnusson and Ryder (1970) went to much trouble to show that the even position is much more highly valued than the odd. To simply assume that it is correct because all metrical lines can be generated that way is not sufficient. In other words, K classifies the occurrence of the sequence housekeeping in strongly weak-strong position as unmetrical because the element keep—wth tertiary stress cannot occur in weak position. We argue instead that the constraint is on the relation even-odd, as Magnusson and Ryder have suggested, rather than on the odd position alone.

While that strategy simplifies his description, it also obscures the meter in some instances. This is particularly apparent in alternations involving the suffix ed, which may be syllabified and thus receive tertiary stress as in Shakespeare's line:

7. And arts with thy sweet gracees grace be. (Sonnet 78)

and in alternations involving dissyllabic prepositions (e.g. against/gainst).
Barth's Law is the accepted name for alternations in the imperfect prefix vowels in Biblical Hebrew. According to the usual statement, these person prefixes are of the shape Cx- (CxC- if the following stressed vowel is high; when followed by a non-high stressed vowel, the prefix is of the shape Ck-). It is shown that the prefix could, as easily, be described in terms of syllable structure: the prefix vowel is \( \alpha \) if the syllable is closed and \( \epsilon \) if it is open. Relevant examples are: \( \text{toqam} \) 'you will rise,' \( \text{tis\text{"im}} \) 'you will sing,' \( \text{tiskav} \) 'you will lie down,' and \( \text{tis\text{"ot}} \) 'you will close.' A decision between the two possible descriptions can be made on the basis of an environment in which the two criteria, syllable structure and vowel height, conflict. The alternation between the passive perfect forms was circumscribed in Genesis 17:26 provide conclusive evidence in favor of a solution based on syllable structure.

It is then shown that posit ing a general rule changing \( \alpha \) to \( \epsilon \) in initial unstressed closed syllables, in addition to providing a unified account of these and other alternations in the verbal system, helps account for alternations in some noun declensions (\( \text{so\text{"an}} \) 'elder,' but \( \text{si\text{"ane}} \) 'elders of ...') but creates problems in the treatment of other noun classes (e.g. \( \text{m\text{"el}} \) 'king,' \( \text{me\text{"al}} \) 'kings of ...'). This leads to a discussion of the rule's generality and whether or not a restriction on the \( \alpha \) rule so that it can only apply to forms of a certain level of morphological complexity will allow for an adequate description of the fact. It is concluded that, while synchronic description of the facts may be possible, the only adequate explanation will be found in a historical investigation of the origins of the \( \alpha \) change in earlier stages of Northwest Semitic.

In a sociolinguistic study of the verb phrase in Southern White English, a pattern of change in progress was observed. The 14 variables studied showed that certain variants were increasing, others decreasing, and yet others stable across time within the community, and that each variable's change was progressing in a wave sensitive to age, social class, sex, and rural/urban origins as suggested by Bailey (1973).

It is possible that these apparent changes were a reflection of age grading, since there are no earlier records of speech in that community. However, the variants that are decreasing are all older forms of English than those which are increasing and are dying or non-existent outside Southern White and Black English. This suggests that age grading is not the primary factor here, but rather language change moving through the community.

The variables examined were the standard and nonstandard variables of NP plural agreement; plural was, is; singular don't; irregular preterits and past participles; ain't; negative concord; passive be and got; perfective done; a-verb-ing; double modals; likets; and negative concord. The data base consisted of tape recorded interviews with 80 natives of Anniston, Alabama, and nearby rural areas. The informants were teenagers and adults over 65 of the working and upper classes. The methodology is based on Labov (1966) and Labov et al (1968).

References:

Language Out of Context: Schizophrenia

Chaike (1974) has attempted to define the language of schizophrenics in terms of features internal to the linguistic code, but Fromkin (1976) has argued that all of these features are also found in the speech errors of normals. Nevertheless, clinicians seem to have little doubt that they can identify schizophrenic language when it is present. This paper explores the thesis that the deficits of schizophrenic language are not internal to the linguistic code, but rather found in the relationship between the code and the social communication setting in which it is embedded.

A review of the psycholinguistic literature (e.g., Goldfarb, Goldfarb, & Scholl, 1966; Mahler, 1972; Shapiro, Fish, & Ginsberg, 1972; Miller, 1974; Rutter, Wishser, & Callaghan, 1975; Davis & Blaney, 1976) indicates the schizophrenic's inability to use language patterns in a culturally determined way. For example, although specific speech defects vary among schizophrenic children, there is a general absence of standard patterns experienced by the normally condition listener as an extreme "flatness". There is also an absence of "sharing" language patterns such as questions, and past and future vech tenses. Adult schizophrenics show similar deficits. Difficulty with a self-editing task indicates they are unlikely to employ selection constraints consisting of the needs of the listener which the speaker must consider in a communication setting. Similarly, experiments using a close procedure show that schizophrenics are less able to predict the speech of other people, and an experiment in which schizophrenics made significantly more errors in high ambiguity items and on high ambiguity items indicates that where the social contextual guidelines for disambiguation are particularly clear, they are much less so for schizophrenics.

The communication setting is an important part of a child's language learning. In fact, a description of the child's utterances may not be possible without reference to his social interaction (Nelson, 1973). At the child's maturity, he must adapt his sentences to changing situations and interlocutors (Brown, 1973). As he makes the transition to the adult language system, he must learn to engage in dialogue, i.e. must learn social communication roles such as speaker, addressee, respondent, questioner, and persuader (Halliday, 1978). It is this dialogue function, this interpersonal function embodying his own involvement in the speech situation, that is deficient in the language of schizophrenics. It is suggested that the study of the child's emerging language and the study of the schizophrenic's language deficiencies can be mutually enlightening.
A Cross-Language Study of Tone Perception

The construction of a universal linguistic-phonetic theory raises questions regarding the nature of phonetic properties or features and the extent to which these features are utilized across particular languages that differ phonetically and/or phonologically. This paper reports on an investigation of the perceptual nature of tone features and the extent to which these features are utilized in 2 typologically and phonologically distinct 'tone' languages - Thai and Yoruba as compared to 1 'non-tone' language - English.

The experimental task involved paired-comparison judgments of dissimilarity for 13 synthetic speech-like stimuli that differed with respect to the fundamental frequency as well as duration. The method of analysis was based on an individual differences model for multidimensional scaling in which individuals are assumed differentially to weight the several dimensions of a common psychological space. The multidimensional scaling analysis for the pooled English-Thai-Yoruba subjects results in a 5-dimensional space that has been interpreted as (1) average pitch, (2) direction, (3) length, (4) extreme endpoint and (5) slope.

The differential weighting of these dimensions or features for a given individual reveals that the perception of tone, to a large extent, depends on the linguistic (both phonetic and phonological) status of tone in his native language. Thus, the 'direction' and 'slope' dimensions are found to be more heavily weighted by the Thai and Yoruba subjects than by the English subjects. The 'slope' dimension, in turn, is most heavily weighted by the Thai subjects - which suggests that the weight or 'salience' of a given dimension may be influenced more by its role on the underlying phonological level than the surface phonetic level. Thai, unlike Yoruba, exhibits contour tones in its phonemic inventory although Yoruba does exhibit derived surface phonetic contour tones. The results of a 1-way analysis of variance for each of the 5 dimensions and a stepwise discriminant analysis of the language groups further point to the linguistic-phonetic nature of these perceptual dimensions.

Earlier proposed phonological features of tone - (+ CONTOUR), (+ RISING) and (+ FALLING) find support in a regression analysis into the 5-dimensional perceptual tone space.

Some Ways of Asking Conversationally Relevant Questions

Although much attention has been directed to the relationships between questions and their answers, there has been little research on the relations between questions and their antecedents, i.e., the textural occasion of questions in discourse. A large proportion of questions produced in conversation are not topic Introducers or 'openers' or the kinds of robust requests for information usually examined in the study of speech acts, but are instead, dependent questions (DQ), directly contingent on the preceding act of the conversational partner. Such questions fulfill a variety of functions (ritual, pragmatic, and referential); however, their integration into the text can be described in a fairly simple model that indicates 1) what component they select from the antecedent utterance(s) and 2) how they determine the form of the answer they request concerning that component. The selection and the determination processes are relatively independent. For example, following the utterance, We just bought a budgerigar, a DQ can specifically select the final noun phrase, but can request a confirmation, e.g. A budgerigar? or a repetition, e.g. A what? Other components of the antecedent could also be selected, e.g. You did what?

An experiment with 16 adult subjects supported a set of predictions derived from the model in which intonation plays a critical role. Following an utterance such as Henry knows a friend of yours, the direction of pitch of the dependent question, e.g. Who versus Who led reliably to choice of the responses, Henry and That Greek fellow, respectively. Further, the pattern held for all WH-questions.

The bulk of this paper presents an analysis of the dependent questions produced by 48 nursery children recorded in peer dyads. It will extend and develop the model from previously reported types of DQ to those that 1) select some potential, but implicit or unexpressed material from the antecedent utterance and 2) determine an answer that elaborates on that antecedent (rather than repeats, confirms or further specifies some selected component of the antecedent). Some of the sources of the quoted material, e.g. pragmatic or semantic presuppositions of the antecedent, will be proposed, and evidence of inferential processes underlying the questions will be provided.

The following is representative of the DQ type, potential request for elaboration, examined (Speakers are 6 girls, 3 : 1 and a boy, 3 : 3; the dependent questions are underlined).

B: I got my poor Teddy bear.
G: Is he sick?
B: No.
G: Well, what's the matter with him then?
B: He's too tired to... (mumbles)

The analysis of the short but common sequences formed by antecedent + DQ + answer supports a distinction between "having a turn" and "having the floor". Further, such sequences provide a natural unit for the examination of discourse ellipsis and anaphora, both of which are highly characteristic of such sequences.
Parental Judgments of Children's Language Abilities

As young children's language develops, the input language provided by adults becomes increasingly complex. Little is known, however, about what cues parents attend to in modifying their speech to children over time, specifically, little is known about parents' awareness of their own children's current stage of linguistic development, even though parents' utterances have been shown to correlate with children's utterances in complexity. The purpose of this study is to find out what parents know about their own children's language.

This paper describes a measure designed to determine parents' knowledge of their children's language abilities, and will present results from a first group of subjects. In the study, mothers and fathers are shown a broad language assessment measure we have devised, and individually asked to predict how their children would perform on each item. The children are subsequently given the test, and parents' and children's responses are compared. Subjects are 12 first born, middle class children aged 3-5, and their parents. The study is in progress. We intend to show 1) the kind of conscious knowledge parents have about their children's language—whether, for instance, parents predict better what a child will say (e.g. two houses) or what the child comprehends, and 2) the relationship between accuracy of parental prediction and linguistic precocity, as measured by our test, on the part of the child.

We hypothesize that parents who are better tuned to their children's language will have more verbal children, and that some kinds of language abilities may be more predictable than others—parents may know more about children's vocabularies than syntax, for instance. The study has relevance to theories of language acquisition, and especially to an understanding of the interaction between parents' language and children's language.

Middle High German, a Voicing Language

According to Trubetzkoy, in archiphonemic neutralization the unmarked member of a privative opposition is realized in the position of neutralization. This approach to markedness is dependent upon the language. Between /t/ and /d/ for example, if /t/ is unmarked, voice is pertinent in the language; while if /d/ is unmarked, tense is pertinent in the language (Trubetzkoy 1969:76-7). Thus, in archiphonemic neutralization in a voicing language, /t/ should be realized; while in archiphonemic neutralization in a tense language, /d/ should be realized.

The difference between voice and tense is indicative of a conflict. Where Welsh, a tense language, has word-final neutralization as in the word pair tag /tag/ 'fair'; -tacach /tek/ (comparative), German, a voicing language, has word-final neutralization as in the word pair Tag /tak/ 'day'. Tense /tage/ (plural). At first glance, it would appear that that which is unmarked in Welsh is marked in German and vice versa, but markedness only applies to oppositions of phonological pertinence, oppositions which must be present for communication (compare Jakobson 1962:9).

The traditional analysis of Middle High German (Eis 1950:27) holds that it was a tense language. This analysis is based upon the dialect of Upper German as it is spoken today (compare Wright 1955:16), which is in fact a tense language. (The other dialects rely upon voice contrast.) This analysis, then, is based upon a modern dialect and ignores the fact that languages do change, and they can change their opposition relationships just as readily as anything else, as has indeed happened in the history of Germanic.

A more reliable method of determining the Middle High German phonological structure is through the use of phonological alternations found in the manuscripts. Between A.D. 900 and 1200, all High German dialects developed the auslaut phenomenon (the final devoicing rule of Klang 1969:47) in which word-final position became a position of neutralization. In this position of neutralization, orthographic t, not d, was realized. Thus, as the voiceless member was realized, it was the opposition of voice which was subject to markedness. As voice was the marked opposition, voice must have been phonologically pertinent, and therefore present in the structure and pronunciation of the language.

In maintaining this analysis over the traditional, we imply that Upper German must have changed back to a tense language sometime during the last seven centuries. This is quite plausible, as Yiddish, a closely related dialect, developed the auslaut phenomenon and subsequently lost it (as pointed out in Kiparsky 1968), becoming at least less of a voicing language. Given such fluctuations between historical stages, it is far better to form our analyses from evidence based on the historical period involved, taking into consideration known phonological behavior.
Conditional protasis in Hua, a Papuan language of New Guinea, occur with a final suffix `mo` which appears elsewhere in the language only on nouns. In fact, only two kinds of NP cannot appear with `mo`: those which qualify other NP, as in *pig skin and his dog*, and those which appear in the vocative case. Functionally, the former are adjectives, the latter, sentences.

At the same time, it is only the presence of this suffix which distinguishes conditional protases from relative clauses, both sharing one set of personal endings. Relative clauses in the future tense correspond to hypothetical conditionals: *hisima* `which he will do` vs. *hisima + mo* `if he will do (it)`.

Relative clauses in the non-future correspond rather to given conditionals, which in English are morphologically unrelated to hypothetical conditionals: *hima* `which he did` vs. *hima + mo* `given that he did it`.

This paper explores the reasons for the similarity of conditional clauses to NP on the one hand and to relative clauses on the other, arguing that conditions are topics of their sentences: immediate constituents of *S* which embody old information. Given conditions, like relative clauses in general, are presuppositions. Hypothetical conditionals - suppositions - are hypothetical givens. Counterexamples to more traditional definitions of conditionals, involving notions like the `cause-consequent` relationship of the protasis and apodosis, or the `hypothetical nature` of the protasis, are easy to find not only in Hua, but in languages like English as well.

Typologically, our analysis will further account for two rather widespread morphosyntactic parallels: that between conditionals and polar questions, and between conditionals and left-dislocated constituents.
Inversion as a Rule in Universal Grammar: Georgian Evidence

In recent years, linguists have hypothesized the existence of a finite set of universal rules, from which a particular language selects those rules which compose its grammar. Some linguists have argued for a rule of "Psych Shift" or "Flip", which would make the initial direct object the subject and the initial subject the indirect object. In general, discussions of this putative rule have not been totally convincing, since the languages being considered offered little evidence on either side of the question.

In this paper I will consider diverse syntactic rules in the grammar of Modern Georgian and show that they strongly support a rule, "Inversion", which makes the following changes in Grammatical Relations:

1. Direct Object → Subject
   Subject-Chômeur → Indirect Object.

It is first shown that for a large number of verbs in Georgian, one series of tenses requires that the initial subject be in the dative case, while the initial direct object is in the nominative. (3) illustrates this; notice the different case marking pattern in (2).

2. glexi tesavs marcvels.
   farmer-NOM sows-PRES seeds-DAT
   "The farmer is sowing seeds."

3. glexs turme dautsesav marcvelbi.
   farmer-DAT apparently has-sown-PERF seeds-NOM
   "Apparently the farmer has sown seeds."

It is then argued that glex- "farmer" must be initial subject and final indirect object in (3), while marcvelb- "seeds" is initial direct object and final subject. Arguments are based on full pronoun reflexivization, possessive reflexivization, case marking, person agreement, and suppletion of the verb root for number or animacy of the direct object.

I then introduce a set of verbs that requires this same case marking pattern in all three of the Series of tenses of Georgian verbs. These are the so-called affective verbs, such as migvarkar "I love you" and ginda "you want it". Arguments are based on facts similar to those enumerated above supporting the same change (1) of Grammatical Relations for all tenses of these affective verbs.

Finally, the complex rules of Number Agreement and former Term Marking are introduced. It is shown that each of these rules can make the correct predictions in the grammar only if Inversion is stated as in (1), both for the affective verbs and for the type illustrated in (3).
Phonological Explanation in Phonetics

As a reaction against the very formal and abstract conceptualization of explanation in orthodox generative phonology, there have been a number of treatments in recent years of the thorny question of what constitutes an explanation in linguistics. Additionally, there have been numerous attempts to explain specific synchronic and diachronic phenomena in phonology by reference to physiological and acoustic phonetics.

Simultaneous with the development of these trends, there has been a growing awareness that just as we have come to respect more of a theory of phonology than it be taxonomy, so too there must be a theory of phonetics which passes beyond simple classification. Just as we expect a theory of phonology to explain why certain sound changes commonly occur whereas others rarely or never do, our theories of phonetics must explain why some speech sound types commonly occur, some rarely, and some never although they are all within "the sound producing capabilities of man." This concern is not novel; the principles of least effort and maximal perceptual contrast have long been cited as functional explanations in phonetics. All of the recent sophisticated phonetic work in this regard has dealt with constraints of the human articulatory, auditory, and neural mechanisms and their mirroring in the universal feature system (Lieberman 1970), with the built-in articulatory constraints on the vocal tract which delimit the range of expected sounds (Lindblom 1972), with the acoustically "natural points of articulation" (Stevens 1972), etc. Although these avenues of research seem very fruitful, it is clear that they will not be able to account for all the data on the frequency of occurrence of sound types.

In this paper, I shall examine the relationship between two "exotic" speech sounds: presupnasalized and postnasalized consonants. Intuitively, both types are apparently complex phonetically involving in the one case a raising and in the other a lowering of the velum within a single consonantal segment; however, presupnasalized consonants occur much more frequently than postnasalized ones in the world's languages. This fact requires explanation. Specifically, I shall argue that this relative frequency can be accounted for by reference to the universal greater tolerance for nasal-offset than oral-offset syllables and to processes responsible for the development and realization of NC and CN clusters as unit segments (typically in open syllable languages). That is, in many primarily CV languages, e.g., Tiwar, a Santaloid language of Cameroon, all closed syllables end in a nasal; the opposite case of exclusively non-nasal closed syllables does not seem to occur. I claim that the development and realization of both types of semi-nasal consonants is conditioned by processes designed to preserve the surface CVCV structure of these languages. The greater frequency of presupnasalized consonants is thus explained by syllable structure preferences and various processes which preserve and optimize that syllable structure. In this respect, I shall argue that not only does phonetics explain phonology, but that phonological explanation has a role in a theory of phonetics as well.

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Close as an Alternative Method of ESL Placement and Proficiency Testing

Recent research in language testing suggests that the close procedure is a useful evaluative tool for ESL specialists. The question asked here is can a close test be substituted for more complicated ESL testing procedures with substantial savings of time and effort and without significant loss of information? Work to date indicates high correlations between close test results and total scores on established ESL proficiency measures. Thus the possibility of stream-lining both placement procedures at language centers and ESL proficiency evaluation in general is suggested. The TOEFL and the placement examination now used at the Center for English as a Second Language (CEFL) at Southern Illinois University are the criterion measures against which a close test is evaluated. The close test and the CEFL placement examination are being administered to over 100 incoming foreign students arriving at SIU during the fall of 1976. The close test is being scored twice: first, responses corresponding exactly to the deleted words are counted as correct (close-exact), and second, responses that are grammatical and contextually appropriate are counted as correct (close-acceptable). To check the validity of the close test against the established criterion measures, simple correlations are computed for the total and subtotal scores of the TOEFL and the CEFL placement test with the exact and acceptable close test scores. With approximately half of the data collected, the results show high positive correlation between the close scores and the total on both the TOEFL and CEFL placement examination. The close-exact correlates with the TOEFL at .77 and with the CEFL placement test at .78. The close-acceptable correlates with the TOEFL at .87 and with the CEFL placement test .85. The two scoring methods correlate at .97. All correlations are significant beyond the .01 level. The preliminary correlations are sufficiently high to conclude tentatively that close testing could be used as an ESL placement and proficiency measure. Furthermore, the differences between the correlations of the close-exact and the close-acceptable with the criterion measures are non-significant. This result agrees with earlier findings that no important information is lost by using the exact-word method which is much easier to apply.


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Dr. Livingstone, I Presuppose

In a recent article Katz and Langendoen argue against Karttunen's proposal that 'holes', 'plugs', and 'filters' are necessary to describe presuppositional properties of complex sentences. They claim that the notions 'holes' and 'plugs' can be formalized as a 'heavy-parenthesis wipe-out rule' (HPWR) and that 'filters' are unnecessary to account for presuppositional phenomena. They contend also that contextual presuppositions, as advocated by Karttunen, are unnecessary to account for presupposition in natural language. In this paper it is argued that Katz and Langendoen's arguments against Karttunen's positions are not compelling.

Katz and Langendoen claim that: "No presuppositions of a component sentence in a complex sentence are presuppositions of the entire complex sentence if they are associated with expressions that appear in a plug." They use the HPWR to "demonstrate" that the claim is valid. However, consider the following examples:

1) I forgot to let out the cat.
2) I didn't forget to let out the cat.
3) I regret that I forgot to let out the cat.
4) I don't regret that I forgot to let out the cat.
5) I regret that I didn't forget to let out the cat.
6) I don't regret that I didn't forget to let out the cat.

Under ordinary interpretations sentence 1) implies that I didn't let out the cat while sentence 2) implies that I did. Therefore, forget (in the forget to constructions above, not in the sense of forget that 3) is a non-factive verb and is a 'plug'. But examples 3 through 6 show that the complement of forget can be a presupposition of the whole. Both 3) and 4) imply that the cat was let out; both 5) and 6) imply that the cat was not let out. I.e., the pairs 3)(4) and 5)(6) both pass the negation test for presupposition. But this means that the claim quoted above is incorrect and that the HPWR is a useless formalism.

Katz and Langendoen propose that the statementhood of the owl is nocturnal "does not depend on there being some actual owl--- past, present, or future--- referred to by its subject." If this proposal is correct, then the example is paraphrasable as if owls exist, they are nocturnal. However, it is easy to exhibit a statement showing clearly that the subject of a generic sentence is referred to, for example, the dodo is nocturnal. Since dodos are extinct, the statement is false. It is incorrect to speak of dodos using as precisely because the dodo is referred to in the generic example. The falsity of the statement does not depend on the supposed nocturnality of dodos. It seems, then, that Katz and Langendoen's claim that: "In generic sentences, the presupposition is wiped out, but the truth conditions remain..." is false.

Finally, Katz and Langendoen point out that Karttunen's example supporting contextual presupposition does not have a single interpretation as Karttunen apparently believes. Katz and Langendoen claim that the ambiguity of the example means that rules of pragmatics (PRAG) must be invoked in cases such as this, not contextual presupposition. But the notion of contextual presupposition does not depend on the examples having a single interpretation. Katz and Langendoen state that "It is not important or possible to specify the nature of the rules that comprise PRAG." In the absence of even some statement of the rules and principles of PRAG, one is forced to conclude that Katz and Langendoen have given at best merely a terminological alternative to Karttunen's notion of contextual presupposition.

The purpose of this paper is to present a mathematical model which predicts the most likely tone shapes of a tone system. Given the total number of lexical tones the model will output two numbers for each tone. The first number represents the onset of the tone and the second number the offset of the tone according to Chao's tone letters. For instance, this model predicts that the two most likely three tone system are a) 55, 51 and b) 55, 33 and 21, that is high, falling and low and high, mid and low. This model is based on the principle of maximal perceptual distance and minimal articulatory difficulty. The parameters (as well as their relative weights) measuring perceptual distance and articulatory difficulties were obtained from consideration of previously reported data by other researchers and two series of experiments. In the first series, subjects were asked to evaluate the perceptual distance between pairs of synthesized stimuli differing only in fundamental frequency. Their judgments were subjected to multi-dimensional scaling analysis. The factors extracted from these data were used as a measure of perceptual distance. In the second series of experiments, 10 subjects (5 speakers of tone languages and 5 speakers of non-tonal languages) were asked to imitate synthesized vowels with various fundamental frequency patterns (3 levels and 6 contours). Their accuracy at matching these patterns was taken as being related to the articulatory difficulty involved in producing these fundamental frequency patterns.

Results from the perceptual experiment indicate for instance, the greater importance of the end point of a tone as opposed to its begin point. Results from the production experiment show the greater difficulty involved in producing rising vs. falling tones.

The predictions made by the model were satisfactorily matched with actual data from more than fifty tone languages. The notion of "most likely tone shapes" based on a trade off between maximum perceptual distance and minimum articulatory difficulty is very useful for understanding why and how tone systems evolve.
A Reanalysis of Tonal Downstep

Over the past twenty years a number of languages have been described with a pitch characteristic known as tonal downstep (Welmers, Winston, Schachter, Stewart, Gleason, Pike, Hyman, and Schuh etc.). While most of the languages so described are African, the phenomenon is known to occur in Mexico, in other parts of the Americas, and elsewhere.

In this paper a close look is taken at the phonology of tonal downstep and a new definition is proposed. In languages such as Akan, Igbo, Efik, Zulu etc., on the basis of which general statements have been made, tonal downstep to H (high) tone only; (2) A three-way opposition between a nonlow tone (H or 'H), while only a two-way opposition is possible only after found after pause or L; (3) A three-way opposition prevents a subsequent H tone from being realized at a higher pitch level; and (4) The process of downstepping a tone is number of phonetic pitch levels. e.g. H-H-H-H-H-H realizations on five successively lower pitch levels. These four generalizations have served as evidence that a third pitch tone. The process of downstepping has been argued to be a phoneme, a juncture, or a process. In fact, most tonologists generally regard it as a syntactic process (e.g. Pike) lowering a high one step from the pitch level of a preceding (nonlow) tone.

Recent investigations into the Grassfields Bantu languages of Cameroon have falsified generalizations 1-3: (1) A L can also be downstepped (L-L vs. L-L); (2) The opposition L-H vs. L-H can exist in addition to H-H vs. H-H; (3) An upstepped H tone can follow a H in the same tone phrase, thereby destroying the tonal effect of terraced level tone systems (Welmers). This leaves us with generalization (4): a downstep process is known to exist only when an infinite number of pitch levels is theoretically possible (as opposed to Welmers' discrete-level languages, where a limit is set on the number of contrasting pitch levels).

These findings suggest the uniqueness of tonal downstep as a paradigmatic process, whose effect is to lower a given tone, whatever its identity and regardless of context, one step from the pitch level it would have been if it had not been downstepped. Thus, in a sequence L-L-H, the downstepped H would have been in that position. This, despite the fact that the H is actually higher in pitch than the preceding L syllable. The same definition is shown to cover the more well-known case of H-H, where H is realized one step higher than a H would have been in that position. By looking at the process as affixing a tone paradigmatically, a general statement concerning all kinds of tonal downstep can be made.
Towards a Relational Characterization of Passives and Impersonals

Keenan (1975) argues that demotion of the subject of an underlying active sentence provides a universal characterization of the passive relationship. This contrasts with the Perlmutter (1974) formulation, which attributed equal or greater importance to the promotion of the active object to subject position. Comrie (1976) argues that the prevalence of impersonal passive constructions, which lack an explicit subject, demonstrates both the primary role of subject demotion in characterizing passivization and, more generally, the need for demotion/deletion processes in a universal grammar.

The suggestion that a single relational condition, subject demotion/deletion, suffices to identify passives as attractive, particularly by contrast with the analysis of the antecedent relation, "subject", in terms of a hierarchy of more than thirty attributes (Keenan 1976). This "subject hierarchy" insightfully recognizes morphological marking (case opposition) as a significant, but not sufficient attribute for the identification of subjects. Can it be correct to omit morphology, in this case verbal morphology (voice) entirely as a criterion for recognition of passive relations? We will argue that subject demotion/deletion is insufficient to select (only) passive derivations, and in fact selects, in addition to indisputable passives, constructions in many languages in which, though impersonal, display few of the verbal, formal, and semantic properties of passives. Defining "passive" relationally requires reference to a number of attributes, susceptible to hierarchical positioning. Verb morphology, subject demotion, and emphasis upon the patient (vs. the active) are directly relevant in the comparison of active and passive constructions. Semantic focus upon the verbal action (vs. actor and patient) is characteristic of impersonal sentences which may share other attributes of either active or passive expressions.

Sinhaele exemplifies the phenomenon of contrast between impersonal (subjectless) sentences which differ formally only as to active vs. passive verb morphology. The active member of the opposition emphasizes the subject stresses the underlying object, which has the same position and case in both the active and passive sentences. Both forms can be derived from an underlying active sentence with an overt (impersonal) subject. The active variant, however, lacks the passive attributes. Somewhat similar constructions are found in Luganda and (for limited classes of verbs only) Breton, Persian, and Latin. Subject demotion is not equatable with passiveness.

In a number of languages, there are impersonal sentence types embodying verb morphology and particles that are not commonly found in basic impersonal sentences. The Spanish reflexive, Estonian and Finnish "fourth person" and the Kannada "impersonal passive" conjugations share this distribution. In such cases, no weight can be given to the traditional grammatical labels, and the analysis evaluates all relevant attributes of the hierarchy.
The Antipassive Construction and the Case Against Relational Grammar

Relational grammar resembles some earlier grammars in that (1) it considers syntactic relations like subject to be independent of meaning, and (2) it is concerned primarily with sentences rather than texts. But semantic and textual features are just what governs the use of the antipassive construction in Inuktitut (Eskimo). Hence recent attempts to explain antipassive constructions in a relational framework cannot hope to achieve their goal of universal validity.

Inuktitut has two active two-argument constructions: the ergative and the antipassive. The proposition "man saw dog" can therefore be expressed in two different ways, as follows:

(ErGATIVE) man-ERG saw -ABS see -indic.-trans.-he/lt

(AntiPASS) man-ABS saw -OBJ see -indic.-intrans.(he)

The abbreviation ERG stands for ergative, ABS for absolutive, and OBJ for oblique case.

An important fact about Inuktitut is that ergative subjects figure in relative clauses only if the direct objects of the matrix and of the relative clause are coreferential (Fergland 1955:49). On the other hand, absolutive NPs are freely accessible to relativization.

Restrictions on the ergative NP's accessibility to relativization have been interpreted in a relational framework by D.E. Johnson (1976). Johnson noted similar restrictions in other languages, sometimes involving coreferential deletion in addition to relativization. He concluded that, universally, antipassive constructions were derived by a rule whose effect was to change an ergative subject into an absolutive one, so it could be accessible to relativization in the way that bar ergative NPs. However, in Inuktitut and some other languages (e.g. Chukchee, Dargwa) the antipassive occurs also as a simple sentence, where neither relativization nor coreferential deletion has taken place. The antipassive form of "man saw dog" above proves this. Nothing in relational grammar suggests a way to explain when a simple sentence is ergative and when antipassive.

In my view, both the choice of simple-sentence construction and accessibility to relativization are easily explained in terms of semantic and textual conditions. My study of North Baffin Tidelt texts showed that in Inuktitut an active construction is ergative only when its patient's referent is already known, or, in Halliday's terminology, given. Otherwise the construction is antipassive. (Detailed examples will be supplied in a handout.) The limited accessibility of ergative subjects follows from this fact and from the fact that direct objects (DOs) are normally patients. If the patient-DO of the relative clause is coreferential with that of the matrix clause, then its referent is known from the latter. Hence the relative clause has a given patient, and must be ergative, with its subject in the ergative case. But if the DOs are not coreferential, the relative clause has a new patient, its structure is antipassive and its subject absolutive. This explains why ergative subjects appear in relative clauses only if the DOs are coreferential.


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Discourse Connection and Demonstratives

It is assumed that a speaker must somehow structure his utterance for the hearer's benefit. A speaker who obeys the cooperative principle of conversation will attempt, among other things, to make clear to his interlocutor the referential and inferential connections of elements in connected discourse.

In the process of uttering a string of sentences, e.g., (1), the speaker assumes that his interlocutor can easily determine the referent of she in the second sentence.

(1) Shirley drove into the lot. She then went into the shoe store.

I claim in this paper that a pronoun may be used when the speaker feels that the NP referred to has a high degree of communicative importance.

There are, however, many cases in which a speaker wishes to refer back to information/elements which he has introduced, but which he believes his interlocutor may not be able to retrieve without some cue that this information has indeed been mentioned. One particular instance of this cueing occurs when the reference to an NP contains new information or recently old (non-topical) information. I will claim then that the discourse demonstrative article or pronoun is employed as a cue in three related situations; (a) when the NP referred to is not topical, e.g. (2)

(2) A critic will always want to evaluate the film as an entity. Although it may possess flaws and imperfections, these (?they) should be placed in a perspective.

(b) when a structure in the preceding sentence is referred to by the speaker's new characterization, e.g. (3)

(3) Ford said yesterday that he was sure to win the general election. That (The) early prediction was thought by most to be a tactical error.

and closely related to (b), (c) when reference to a topical (old) element is made with added new information, e.g., (4)

(4) ...Their (the mathematicians) power has enabled them to penetrate deeply below the surfaces they started to explore but has also enclosed them in high walls over which they can no longer see. These (The) disdainful mathematicians overlook the fact that the deepest and mightiest rivers are continually fed by tenuous, vaguely defined clouds.

I further claim that my analysis of discourse demonstratives goes a long way in precisely defining what Kuno 1972 has called a predictable theme. The communicative importance of an element is what determines reference with definite article, demonstrative article/pronoun, or simple pronoun.

A History of the Sanskrit Gerund

This paper will (1) offer a diachronic account of the Sanskrit gerund (ger.), and (2) present some suggestions concerning the syntactic development of ger. clauses in Early Indic.

1) It is clear that Old Indic endings reflect, for the most part, regrammaticalized instrumental (-tvā, -vā, -tyā) or locative (tvī) verbal noun (vā) suffixes, and that they are to be associated etymologically with Old Indic infinitives (in -tu, -ti, and -j. The dominance of instrumental/comitative nominalizations in the prehistory of Sanskrit gerunds is consistent with the facts that the subject of the ger. is always equivalent to the logical subject of the main verb, and that the action of the ger. phrase always precedes or is concurrent with that of the main verb.

The reinterpretation of these forms as verbs (vās) may be explained through an association by speakers of instrumental ger. phrases with (near) synonymous clauses introduced by the conjunction vaddh 'when'. A morphological correspondence between gerund and vaddh clauses becomes apparent if we interpret vaddh as vad (subordinating conj) + a inst/com. ending, i.e. the same as in -tvā - -tvā (cf. the traditional, e.g. Macdonnell 1916:213, unmutated analysis of vaddh as vaddh).

If a formal relationship and semantic equivalences obtain for i as i, i2, i3, then a syntactic restructuring of i a as i2 is not unmotivated.

Moreover, this development might well represent the model upon which the reinterpretation of gen., dat., and acc., vms. in -tu and -ti as vās. (i.e. infs.) is based, as it is textually clear that the reanalysis of forms in -tvā (inf.) + -tu-m, etc. postdates that of -tvā (ger.) + -tu-m.

2) With special attention to the Alarteaya Brahmanas (which, according to Keightley 1992:33-36, offers seven chronological strata of Old Indic), but with reference to other Vedic and Brahmanic texts, it will be demonstrated that ger. phrs. in the earliest language served to express propositions which relate old, predictable, or presupposed information, while in the later language ger. phrs. show some restriction on the nature of the information which is introduced. Compare i and v.

iv) ...tām sagābhiru. tām sambhrtāya urur Ābhinav...vās. V-fi nte acc ger V-fin acc
    'They gathered in; having gathered it they said to the Ābhinav...

v) ...aṅḍraṃ vah āh itemName puṣṭaṁ śāśāna niruṣyā tesa yajeta
    acc ger V-pref
    'He should prepare in its place a cake for Indra or Mahendra and sacrifice with it.'

The later usage can be compared with the consecutive use of the Japanese gerund in -te and with the Turkish consecutive gerund in -ip and may be seen to be associated with the strong tendency toward GV structure in the development of Indic.
Anaphora, deixis, and Relativization in the Rigveda

In an important study, Avery (1881) made a count of all clauses involving the relative pronoun यथा- in the Rigveda and found that out of nearly 4000 passages the relative clause followed its matrix clause in 50.8 percent of the cases and preceded its matrix clause 46.8 percent of the time (certain marginal positions complete the total). It seems to have gone unnoticed, however, that in those cases in which the यथा/यथा- pronoun occurs in correlative sequence with the यथा- relative the यथा-... यथा-... यथा- order predominates by a wide margin over the inverse यथा/यथा-... यथा- order. In this paper it is claimed that the reason for the aberrant frequency in the ordering of correlative elements in this one sequence type as opposed to all other relative clauses is the strongly anaphoric nature of the यथा/यथा- pronoun. In order to demonstrate this we will employ the यथा/यथा- with that of यथा, the other major demonstrative pronoun in Vedic. Several kinds of evidence reveal that यथा is solely a deictic pronoun in the Rigveda and as such is opposed in usage to the anaphoric यथा/यथा- demonstrative. The distinction between anaphoric and deictic reference in the Rigveda is clarified with regard to several other types of pronouns, and it is argued that the यथा/यथा-... यथा- sequence is merely a stylistic inversion on the part of the Vedic versers of the basic यथा-... यथा- construction. This can best be seen in hymn 1.4, where the two different types occur within a few stanzas of each other:

(1) a. अन्रम चौध् ... यथा संक्षिप्तम् ताः सर्वम् (1.4,4a)
   'Ask Indra ... who is better than thy friend.'

b. यो रूपो (स)वानिर मर्थेन ... ताम्सी अन्रमा गायते
   (1.4,10a,c)
   'The one who is a great stream of wealth ... to that one, Indra, sing.'

The fundamentally anaphoric nature of यथा/यथा- in the Rigveda as well as the predominance of the यथा-... यथा/यथा- ordering of correlative clauses involving this pronoun furthermore provide us with strong evidence for an OV type ordering of relative and matrix clauses in an archaic Vedic correlative sequence.

References

Tongue Twisters

This report covers the initial stages of an ongoing program of research on tongue twisters and their implications for normal speech production. Spontaneous speech errors have received considerable attention in recent years, and attempts have even been made to induce similar errors. (Saars and Hotley, 1974) But a neglected and potentially revealing source of data is that phonetic sequences traditionally called tongue twisters, which appear to be characterized by repetition of similar segments and to be especially sensitive to rate of articulation.

The classic tongue twister is one which induces errors at normal speaking rates, but I assume that tongue-twisterliness is a continuum, with the degree of tongue-twisterliness indicated by:

a) the probability of error at a given rate of repetition, and
b) repetition rate for error-free performance.

In an attempt to operationalize the notion of tongue-twisterliness, as a preliminary to investigating its sources, I have conducted experiments using these two measures as independent variables and stimuli consisting of CVCC and CVCCV sequences. Both measures produced a consistent ranking of the stimuli, and both correlated highly with each other and with intuitive judgments of the "difficulty" of producing a sequence. (E.g., if the same was repeated more slowly and caused more errors than papah.)

Other (tentative) results include:

a) Though the tongue-twisterliness of a sequence is a reliable function of its constituents, the contribution of any given phonetic segment is not predicted by its feature composition (on a standard feature analysis).

b) The tongue-twisterliness of a sequence is not a simple additive function of the tongue-twisterliness of its constituent segments; interactions between these segments are significant.

c) The segments and their relation to the stress pattern both appear to affect tongue-twisterliness. This suggests that Schuurup (1973) is at least partly correct in his suggestion (based on intuitional data) that abstract variables of patterning are relevant to tongue-twisterliness. These patterning effects will be pursued in further experiments with more complex stimuli.

d) A particularly interesting result was that tongue-twisterly sequences not only were produced relatively slowly but showed a significant deceleration over the course of twelve repetitions. This suggests that the complexity of these sequences is not simply due to the complexity of the articulatory gestures themselves but rather to some problem of recovery from those gestures before they can be repeated.

The generalizations stated above are based on initial data from nine subjects. Further data will be available by the time of the ISA meeting.


Intonation is a MCP

Green 1976 presents a considerable amount of data under the rubric Main Clause Phenomena (MCP). As he and others have noted, there are certain syntactic constructions and lexical items which occur freely in main clauses but only under very restricted and seemingly idiosyncratic conditions in subordinate clauses. This paper presupposes some such notion and argues that all intonational and sentence-acent phenomena can be considered MCP.

It has been observed that certain intonation contours cannot be embedded. Cutler 1974 observes numerous restrictions on the embeddability of ironic tones-of-voice; we can say Austin is a real swinging town, meaning it isn't, but not, in the same way, "Bill realizes that Austin is a real swinging town.

Similarly, Liberman and Sag 1974 point out that what they call the "contradiction contour" cannot occur on subordinate clauses. We can say:

Elephantiasis isn't incurable (to be written jElephantiasis isn't incurable)

but not Medical science has shown that elephantiasis isn't incurable! We can, of course, perfectly well say jMedical science has shown that elephantiasis isn't incurable, but if we do, we're making a claim about what medical science has done, not about the nature of elephantiasis. The "pragmatic" part of Green's remarks about MCP is relevant here: if we put the contradiction contour only on the embedded clause, we seem to be making a claim about elephantiasis, and the point of the main clause Medical science has shown that... becomes unclear.

But the contradiction contour can be embedded in exactly the sorts of environments discussed by Green. The following is a possible narrative:

When the doctor first told me I had elephantiasis I really got depressed and morbid and I was all set to end it all. But then I got thinking about it and I realized that elephantiasis isn't incurable and what the hell was I getting so upset about?

The contradiction contour is quite naturally embedded in the main clause I realized that... there is no conflict between the intention of the intonation and the content of the main clause. The similarity to Green's findings about other MCP is striking.

Evidence from other intonational phenomena will be presented to show that all intonations, not just specific contours, can be considered MCP. This has implications for the further study of both intonation and of MCP. The point is not so much that intonations cannot be embedded, but rather that intonation is a whole-sentence phenomenon. It gives the hearer pragmatic information about the nature of the speech act, or, more simply, it helps the hearer understand what the speaker is trying to get across, the point he is trying to make. Considering intonation will steer us away from conclusions about MCP based solely on syntactic transformations and help us to see the significance of such "whole sentence" effects in their fullest perspective.


Green, Georgia. 1976. Main Clause Phenomena in Subordinate Clauses. Lg. 52: 382-397.

The Inadequacy of Feature Specifications

The main object of this paper is to present examples of phonological contrasts that have been previously neglected. Systems of phonological features for describing the contrasts that occur in the languages of the world have been proposed by Chomsky and Halle (The Sound Pattern of English) and by Ladefoged (Preliminaries to Linguistic Phonetics and A Course in Phonetics). It will be shown that both these systems are observationally inadequate. Ladefoged’s work is slightly more comprehensive, but he has failed to take into account many phonetic facts and phonological contrasts. For example, he is wrong in saying that there are no velar laterals. Evidence will be given from Eastern Highland languages of Papua New Guinea showing that these occur and contrast with both dental and alveolar laterals. This evidence also indicates that Chomsky and Halle are wrong in saying that “this feature (lateral) is restricted to coronal consonantal sounds”. Ladefoged is incorrect in saying that languages do not contrast more than 6 places of articulation, as will be shown by data involving contrasts among seven nasals in Yanuwa (Northern Territories, Australia). Ladefoged also neglects the possibility of contrasting bilabial and alveolar trills of the kinds found in Austronesian languages such as Titan and Kelo. Recordings and other instrumental data on all these sounds will be presented.

Both Ladefoged’s and Chomsky and Halle’s theories can be patched up to take into account these and other examples of observational inadequacy. But the more this is done the more it appears that these theories are simply ad hoc systematizations of the data. A principled statement of the elements required within a phonological theory must start by proposing phonetic primitives that can be justified on non-linguistic grounds.

Continued Chain Shifting of /u/ and /o/ in Parisian French

During three months of field work in Paris, conversations with working and middle class Parisians were recorded. Results of an acoustic study of the vowels, performed using linear prediction to extract the formant frequencies, show previously unreported variation in the frontness of /u/ and /o/. Furthermore, many of the backer variants of /u/ and /o/ are heavily overlapped and are not clearly identifiable as /u/ or /o/ when presented to the native speaker in near phonetic isolation. This would lend support to the functionalist explanation for the fronting of back vowels (Martinet 1955).

Labov, Yaeger and Steiner (1972) present massive spectrographic data which give concreteness to Martinet’s model of chain shifting. They classify all chain shifts into four patterns, one of which is of particular interest in French. In this chain shift, back vowels are raised from low to mid or mid to high or both, and at the same time mid or high back vowels are centralized or fronted. This pattern was the source of the Modern French high front rounded vowel. Old /o/ was raised to /u/ and old /u/ was fronted to /y/.

This study shows that the dynamics of the chain shift /o/→/u/→/y/ are still active in Paris dialect. Variation in the frontness of /u/, as perceived and as measured by second formant frequency, causes the phoneme’s frontest variants (e.g. after /t/) to approximate [u]; its backest variants heavily overlap /o/ and are often indistinguishable from it. Some speakers show considerable fronting of /o/, especially in closed syllables. This latter fact would support the basic functionalist axiom: that merger occurs most readily when the merging phonemes carry the least functional load. Since French /œ/ occurs almost exclusively in open syllables, the fronting of /o/ in closed syllables would pose no functional problem. Note that there is no articulatory universal at work here, since in Philadelphia English the situation is exactly reversed: it is the /o/’s in closed syllables that lag behind the open /o/’s in the fronting process.
Complex Nominals: Nouns of Limited Variety and Unlimited Length

Many linguists, including Lees 1960, Chomsky and Hale 1968, and Jackendoff 1975, have claimed that nominal compounds like apple pie and steam iron are themselves syntactically nouns (but cf. Levi 1975, who classifies them under "nonpredicative NPs"); this claim has, however, been treated as such a self-evident assumption that virtually no syntactic evidence is ever offered in its support. Few linguists have realized, however, that precisely the same claim should be made about expressions with nonpredicating adjectives (e.g., pedal extremities, polar climate, feminine intuition) as well as about those expressions formed by nominalization processes (e.g., presidential referendum, student decision, automatic emissions). It is the purpose of this paper to remedy these deficiencies by

1) claiming that all the forms cited above constitute a single (surface) syntactic constituent, to be called a complex nominal (CN);
2) showing that the processes that form CNs can produce nominals of unlimited length but of strictly limited internal variety (namely, binary combinations in any order of these two units: N and \ring{N}), and
3) providing syntactic arguments that all CNs, regardless of length and internal complexity, must be dominated on the surface by a N node.

Since (1) and (2) have been argued in previous research, this paper will focus primarily on substantiating (3). The arguments include at least these:

a) CNs may appear with affixes normally used only on Ns, not CNs, as in:
   - [copy editor], post-[Arab summit] realities, anti-[gun control] forces;
   - impossible grammatical models, *socio-psychological principles*;
   - many agentic forms like *critical essayist* and *prolific linguist*; and
   - the highly technical forms *set theoretical framework* and *text grammatical models*.

b) Placement of predicating adjectives treats CNs as Ns, not CNs:
   - The [American invasion] was unjustified. [cf. America's invasion...]
   - *The American invasion* is ambiguous.
   - *The/An American invasion* was carefully reviewed.
   - *The/An American's invasion* was carefully reviewed.
   - *The/An presidential appointment was carefully reviewed. [cf. A president's appointment...]

(d) CNs resemble Ns, not CNs, in constituting anaphoric islands (see Postal 1969) with respect to outbound anaphora whose antecedent is the prenominal modifier (or, for nonpredicating adjectives, their underlying nouns):
   - *Divorce* lawyers show a high incidence of it.
   - *Coffee* tables are usually too crowded to put it on.
   - *The nervous system is composed of millions of them.

*American* incursions haven't won her many friends.

e) Since CNs can regularly replace Ns in recursive applications of CN-formation rules (cf. cake plate/apple-cake plate), a characterization of CNs as Ns would both simplify grammatical description and increase predictive accuracy. (Treating CNs as NPs makes innumerable wrong predictions.)

f) The fronted (non-phrasal) stress of many CNs (e.g., final wave, polar bear, apple cake, law office) suggests a N rather than an NP constituency.

Sufficient examples will be provided to show that each argument carries through similarly for the three sets of data cited, thus demonstrating (1) as well as (3). Time permitting, some serendipitous fallout as well as new problems produced by this demonstration will be presented.

REFERENCES:
Jackendoff, R. (1975) "Morph. & Sem. Regularities in the Lexicon", Lg. 51 
Development of Vowel Production in Infants

The development of vowel production in five infants growing up in monolingual English speaking environments has been followed over the period of 16-180 weeks of life. Tape recordings have been made at intervals of at least two weeks of the infants and their mothers "conversing". Special recording techniques, sound spectrograms and computer-implemented acoustic analysis yield fundamental and formant frequencies and durations of the infants' utterances. The data address several theoretical issues:

1- The infants do not appear to mimic the lower formant frequencies of their mothers' speech. As they begin to produce the vowels of English they produce formant frequency patterns that are high in frequency (F3 ranges from 5-6 kHz) and appropriate to the short lengths of their supralaryngeal vocal tracts. The formant frequencies of some vowels fall as the infants mature, e.g., F1 of /U/ for one infant falls from 1.0 to 0.5 kHz. These data are consistent with the presence of a hypothetical, independently determined neural mechanism that "normalizes" the speech signals perceived by humans in terms of estimated supralaryngeal vocal tract length. The infants never hear any vowels that have the high formant frequency values of the vowels that they can produce with their short supralaryngeal vocal tracts. They nonetheless produce vowels that have formant frequency patterns that approximate those of adult speech after appropriate corrections for the smaller size of infants' supralaryngeal vocal tracts are made.

2- Individual differences in the emergence of various vowels exist but all the infants gradually enlarge their vowel repertoires. At 16 weeks we can perceive tokens of the vowels /I/, /E/, and /a/. /I/ and /U/. The vowel /e/ occurs later, /a/ and /i/ still later. The vowels /o/, /a/ and /u/ hardly ever occur. The data suggest that the acute axis in English develops before the grave axis. The infants do not produce all known sounds of all languages during the babbling period.

3- The formant frequency patterns of the infants' /I/ and /a/ vowels have acoustic correlates consistent with the phonetic features hypothesized by Jakobson, Fant, and Halle as salient for the classification of these vowels. F1 and F2 converge for /a/ producing a mid-frequency spectral peak. F2 and/or F3 are high for /I/, producing a high-frequency spectral peak.

4- The acoustic analysis indicates the gradual emergence of a vowel triangle defined by the first and second formant frequencies. At 16 weeks the five vowel sounds that occur all overlap when plotted on F1 - F2 axes. The different vowels are perceived gradually in different areas of the F1 - F2 plot. The boundaries of the acoustic vowel space also enlarge throughout the period as /e/, /a/, and /I/ emerge.

Word Order and Word Order Change in Mandarin Chinese

It is proposed that Modern Mandarin is fundamentally an SVO language, as were its ancestors Old Chinese (ca. 1000-400 B.C.) and Middle Chinese (ca. 600-1,000 A.D.). The major syntactic change from Old Chinese to Modern Mandarin has been the spread to all major constituents of a tendency already present in Old Chinese for NP's to be distinguished in functional meaning according to their placement before or after the main verb. Thus, in Modern Mandarin, pre-verbal NPs are marked for definiteness; postverbal NPs are not. Preverbal time phrases indicate punctual time; postverbal time phrases indicate durative time. Preverbal place adverbs indicate directions of actions; postverbal place adverbs indicate locations of participants (Tai, 1974). Preverbal descriptive adverbs describe the agent's behavior; postverbal descriptive adverbs describe the manner of action.

This proposal is more explanatory than that of Li and Thompson (1975, and elsewhere) that Mandarin is an SVO language descended from an SVO ancestor. Among the reasons advanced for this contention are that the present proposal: 1) accounts for the placement of all major constituents with regard to the main verb and not just for noun phrase placement; 2) accounts for the development of 'coverb' (or 'prepositional') phrases (S-O-V-c-O-V) during the past 1500 years as a general replacement for postverbal prepositional phrases (S-O-V-c-O); 3) accounts for the otherwise inexplicable constraint restricting the number of postverbal constituents regardless of what they are; 4) assigns basic word order to the order with positions not marked for function, thereby avoiding the methodological trap of deriving transformed structures from structures of restricted usage; 5) applies to other dialects of Mandarin as well as to Mandarin and Wing's proposal draws an unnecessary typological distinction between them; 6) obviates the inherent contradiction in Li and Thompson's claim that language change has brought about both a shift in word order and a specification of definiteness through position without adequately demonstrating how definiteness was affected by the purported change; 7) words with and adds support to, Li and Thompson's (1976) proposal to classify languages according to subject- or topic-prominence, whereas Li and Thompson's own (1975) proposal essentially conflicts with the description of Chinese as topic-prominent.

In theoretical terms, the present proposal encourages a productive re-examination of the notions of markedness, function, and fundamental word order and requires us to ask the following questions: a) Can statements of fundamental word order be made without reference to inherent positional functions? b) What limitations must be imposed on statements of fundamental word order and the ordering of other constituents? c) Given differences among languages in word order, markedness, positional function, and the course and motivation of historical changes, how many factors must be taken into account in typologizing different languages?

Answers to these questions will be proposed, leading to a general claim that word order, positional function, markedness, and language typology are matters which require highly complex treatment and that, within a broad assumption of the necessity of language universals, the description of different languages must be understood to be a multivariable and highly relative procedure.
Parental efforts to adjust their speech so as to provide their children with an appropriate grammatical model have long been documented, especially in middle class American settings. This desire to assist the child with his/her first incursions in grammar is also evident in Korean and Brazilian middle class parents. It will be suggested in this paper that: 1) the strategies available to parents for this purpose reflect cultural practices and are sensitive to constraining characteristics of the target language; 2) children develop their own strategies in response to parental input, which has the effect of setting nationalities apart with regard to children's initial hypotheses concerning grammar, even at a very early stage.

The data in this paper were collected in a naturalistic situation, at the homes of the subjects, in Providence, Rhode Island, Rio de Janeiro, Brazil, and Seoul, Korea. Parental utterances to which constituted responses to the children's preceding utterances were categorized with respect to the form and content of the children's utterances. Children's utterances were categorized with respect to success or failure in approximating the target language (e.g. Brazilian children are far more successful in learning inflections than prepositions). This study looks in particular detail at children's continued attempts at learning grammar through repetition, substitution, hesitation and circumlocution. The investigators were careful not to bias their analysis by assuming a priori that the same analytic categories would be appropriate for all three languages.

Our results suggest that quite early on in the process of acquiring language Brazilian, American, and Korean children orient themselves towards diverse aspects of grammatical structure, relying on different cues in the three languages to work out basic sentence frames. Grammatical complexity develops in several ways which are not always predicted by MIU. If these results are further substantiated by data from other languages, an important methodological consequence follows: namely, that MIU cannot be utilized as a cross-linguistic measure of grammatical development, since it does not provide for the computation of operations which leave no trace on the surface (some of which are acquired quite early in Portuguese and Korean). The authors further suggest that more work must be done on differences in linguistic and cultural input before any claims can be made concerning universal features of early grammar.

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A Classification of Semantic Relationships in American English Folk Definitions

This paper presents a classification of American English folk definitions in terms of the semantic relationships of which they make use. In addition, we shall show that there is a close correlation between the type of word being defined, i.e., its syntactic class and semantic field, and the specific semantic relationship or relationships which tend to appear in its definition. The data consist of 583 "list definitions", definitions elicited by presenting an informant with a list of words to be defined, and 319 "natural definitions", definitions which arise in the course of talk not concerned with definition as such.

The analysis of these definitions resulted in a classificatory system consisting of five major and seven non-major semantic relationships. The major relationships occur with much greater frequency than do the others, not only overall but within specific subsets of the data (e.g., natural vs. list definitions, definitions elicited from speakers of a particular educational level; overall they account for approximately 75% of the data). These five relationships are similitude, field inclusion, situation, description, and function. All the relationships (major and non-major) are very broad and must easily be seen to include two or more subtypes of relationship. For example, similitude includes synonymy, antonymy and comparison, and field inclusion covers not only placement of a term within a hierarchy ("shirt, a piece of clothing...") but also its placement in any way within a semantic field ("cold, indicates temperature"; [field goal] "what they do in football...").

Initially, an attempt was made to classify the data using more specific categories, along the lines of the system proposed by Casagrande and Hale in their analysis of Papago folk definitions. The American English data, however, are much more varied (Casagrande and Hale's data consist solely of list definitions of common Papago words, elicited mainly from a single informant) and a system of the level of specificity of Casagrande and Hale's would be too large to be really useful. We will discuss the need for fairly broad categories and the reasons for analyzing definitions in terms of the specific categories chosen, including the fact that words in particular semantic fields tend to be defined using the same semantic relationships. Finally, it will be shown that the five major relationships have more in common than mere frequency: they form a natural group in that it is exactly these relationships which either describe the lexical item itself or place it within its own semantic field. This fact, along with their frequency of occurrence, suggests that all definitions could be formalized (e.g., in a lexicon) in terms of these five relationships.

WHY TOUGH-MOVEMENT IS IMPOSSIBLE WITH 'POSSIBLE'

Tough-Movement (or Deletion) is a governed phenomenon. To my knowledge, nobody has been able to pinpoint just what is the common denominator of Tough-Predicates. However, it has often been suggested that somehow TPs revolve around the meaning of 'easy/difficult' in an intuitively understood sense. Also, it has been a long tradition in generative grammar to treat 'possible' as an accidental gap with regard to Tough-Movement:

1. John is easy/difficult to please.
2. John is possible/impossible to please.

I think this familiar practice implicitly assumes the following: All TPs share some properties in common. 'Possible' also share these properties, and yet somehow it fails to undergo TM. In other words, it is claimed that 'possible' is qualified to be a full-fledged member of TPs. In this paper, I will challenge this widely accepted view. I show that there are many important properties of TPs which are shared by 'impossible' but not by 'possible', which strongly suggests that there is inherently semantic reason why TM is impossible with 'possible'. For example:

I) 'easy/difficult'
    Compare (3a) and (3b):
    (3a) My husband has been a, impossible
        b, extremely difficult
    (3b) Notice that (3a) cannot be used by a woman who has been actually separated from her husband. (4) is ungrammatical.
    (5) My husband has been impossible to live with. He has been in prison for the last 5 years, you know.
    While 'impossible' is often very close to 'extremely difficult', 'possible' cannot be used either to mean 'easy' or 'extremely easy'.

II) 'emphatic/emotive/subjective' property
    Klima (1974) noted that a subset of TPs act like Negatives:
    (6) It was difficult to find anything/anything in Paris.
    Now, Postal (1971) observed that TPs include some slangish expressions such as 'snap', 'bitch', etc., and a subset of the non-technical colloquial terms for male and female genitalia. Unfortunately, Postal failed to recognize the inherent relationship between his and Klima's observations; in American culture, the emotive, subjective and strongly NEGATIVE feelings of the speaker are often linguistically realized with the help of 'obscene' words. I claim that those slangish expressions are really emphatic/subjective/emot/ exaggerated counternarks of easy/difficult:
    (7) Now, what about our 'possible' and 'impossible'? Consider (3a) and (7):
    'This steak is impossible to chew unless you have teeth of brass. Of course, they are highly emotive, subjective, emotive and exaggerated.
    (8) Those important muscles are really emotive/subjective/emot/ exaggerated property.

III) 'barely possible'
The popular treatment will completely fail to explain the difference between (8) and (9):

8. John is barely possible to live with.
9. John is barely possible to factor.

IV) Poss-Ing Complementiser 'possible' is uncomfortable with a Poss-Ing Complementiser, but not 'impossible'. Compare (10) and (11):

10. For me to please John is easy/difficult/possible/possible.
11. For me to please John is easy/difficult/possible/impossible.

EXPERIMENTAL AND CLINICAL BRAIN RESEARCH SUPPORTS A MODEL OF THE FUNCTIONING OF THE CEREBRAL HEMISPHERES IN MAN, IN WHICH THE LEFT HEMISPHERE CONTROLS LANGUAGE, SPEECH, CALCULATION AND OTHER LINEAR PROCESS FUNCTIONS, WHILE THE RIGHT HEMISPHERE CONTROLS PATTERN RECOGNITION, MUSIC PERCEPTION, AND OTHER PARALLEL PROCESS FUNCTIONS (Sperri 1967, Gutman & Rudge 1970). This model turns out to have a great appeal in subfields of the social sciences that traditionally have formulated their constructs without particular heed to the biological basis. Kaplan and Tenhouten (1976) claim that left and right hemisphere dominance reflect conditions of social dominance and subjectivity respectively. Chomsky and Harnade (1976) feel that the juxtaposition of the universal biological nature of man with the well-attested cross-cultural differences in cognitive strategies and styles in the anthropological literature creates a paradox which can find its resolution in "fundamentally different physiologically based cerebral processes" (1976:124).

In this paper I examine several such applications of the model. The conclusion reached is that while not denying the validity and importance of the neurophysiological findings in cognitive psychology, it is recommended that we be cautious in generalizing against the assumption of cognitive styles and logical processes to hemispheric location in order to avoid a sort of modern phrenology. None of the authors examined has presented his hypothesis with any intention of defining cultural imperialism as a specific mode of thought. Nevertheless, as these and other writings on this topic find their way to a wider readership, they will inevitably speak to a deeply held biological bias, more or less unconscious, about the biological constraints on human performance and human differences---the same bias that resonated to the writings of Jensen, Eysenck and Herrnstein. Extreme caution is therefore in order when presenting to the educated public results of such seemingly scientific impeccability as differential EEGs among socially and linguistically defined groups (Tenhouten and Kaplan 1973).

An examination of the dual functions of language---as an information processing and storage system and as a device for accomplishing social interaction, plays the central role in this critique, for it is largely a consequence of ignoring this dual functioning of language that other, less enlightening conceptual dichotomies such as "abstract" vs. "concrete" and "verbal" vs. "nonverbal" have come to dominate the field. These two functions interact in speech and in language-mediated thought, but they may be teased apart in animal models, in a model of cognitive development (Mattingly 1972), and conceptually for investigative purposes. The two functions cut the many things participants may be doing in an interactive situation or experimental context, and, as Labov and also Cole and Scribner (1974) have demonstrated, what is said may be grammatically different. The articulation of this online activity to their long term memory store is so little understood that ascription of some ill-understood performance to some hemispheric localization appears to be premature.

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Visual Shadowing: Examining Language Processing in Another Mode

Shadowing is an experimental task in which a subject repeats back (shadows) a stimulus prose passage as quickly as she/he perceives it. Previous shadowing research has been done in the auditory mode with hearing subjects shadowing tape-recorded stimuli. Our research focuses on shadowing in the visual mode with deaf and hearing signers shadowing videotaped stimuli. In a preliminary experiment, we discovered that response latencies of deaf native signers for visual shadowing of American Sign Language (ASL) were the same as latencies reported for auditory shadowing of English. The response latency range in the visual task fell between 250 and 1000 msec, as compared to 250 to 800 msec in English (Marslen-Wilson, 1973). This finding is exciting since it indicates that rate of speech perception is not dependent upon language modality, but rather upon higher order functions.

We had expected response latencies to be longer, especially since the stimulus tape included a considerable number of pantomimes. This variable (increased use of pantomimes) would seem to reduce predictability of structure and thereby increase response latencies and number of errors.

Another dramatic result was that native hearing signers experienced extreme difficulty when they attempted the task, while native deaf signers performed it easily. This suggests that the ability to shadow successfully is strongly influenced by the subject’s primary modality of communication.

In our current experiment, we ask native signers (deaf and hearing) to shadow a pair of stories in ASL. One story includes pantomimes while the other does not. We are examining response latencies and errors in order to explore the influence of pantomimes on the rate of processing. In addition, we are comparing data from deaf subjects to that of hearing subjects, seeking possible explanations for the disparity between the performances of the two groups.

The study of auditory shadowing has led researchers to make certain claims about language processing. Because these claims have been based on speech perception experiments, it is crucial to extend the scope of the research beyond the auditory modality. Our studies in visual shadowing provide significant insight in this direction.

On the Word Stress Cycle in English

The cycle has been used in English to account for placement of stress or to block vowel reduction in some words (e.g., prior stress in expect blocks vowel reduction in the second syllable of expectation). Various proposals have been made for doing away with the cycle, but most of them fall short in one of two ways: (1) they are ad hoc (e.g., Liberman 1975 prestresses +ic finally to produce stress, as in elastic), or (2) they are insufficient (e.g., Setera 1974 can't crucial forms; Lee 1969 does accept the cycle for pairs like equlvocate/equlvocat).

I propose a principle of stress assignment (accompanied by two adjustment rules) which improves upon the cycle and competing proposals, for all but one class of phenomena. The Constant Contour Principle is as follows: when a suffixal material is added to the end of an existing word and primary stress moves to the right of its previous position, then the stress contour remains the same. Examples are equlvocate/equlvocat, identify/identification, and elastic/elasticity. (This last pair causes some analysts--e.g. Halle 1973--problems.)

The first adjustment rule, from Hill and Nessly 1973, is that word-internal 3-1 stress sequences are often avoided (by shifting 3 stress to the left). The rule applies, for example, optionally to elasticity, moving 3 stress to the left and leaving the unstressed syllable as in elasticity/elasticity ("elasticity"). The second adjustment rule, from Chomsky and Halle 1968, reduces pretonic, noninitial vowels in open syllables, as in analytic/analyticity ("analyticity"). In "cyclic" phenomena, both adjustment rules apply only to words in which stress has shifted to a suffix.

The Constant Contour Principle plus the two adjustment rules correctly produce the stress contour in the vast majority of examples of "cyclic" application. Some exceptions, such as compensate/compensation, are in fact irregular, and can be traced to an historically earlier pair compensate/compensatory.

My analysis of "cyclic" stress has four advantages over the cyclic analysis: (1) it explicitly states that the function of the cycle is to preserve stress contours, (2) it narrows the application of "cyclic" stress to words where stress has shifted to suffixes, (3) it accounts for variants such as elasticity/elasticity, and (4) it excludes such irregular pairs as compensate/compensatory.

The analysis that I propose does not account for "cyclic" stress in pairs like permit/permit. Such pairs have been attacked by Ross 1972, Gehrle 1972, Liberman 1975, and Aronoff 1976 on grounds that the stagings are incorrect, that many words lack similar pairings (e.g. report), and that the analysis violates strict cyclicity. These pairs should be discarded as irregular, or else they should be handled by some new principle, since they have different properties from the phenomena discussed above. Both phenomena, if valid, should not be combined under the excessively broad notion of the cycle.
A Continuum of Stress Types

Traditional descriptions of word-level stress have contrasted “fixed” stress with “free” stress (Hyman 1975a, O’Connor 1973), establishing a dichotomy between categories by which the stress behaviors of all languages presumably may be defined. “Free” stress is capable of falling on different-numbered syllables in different words; “fixed” stress always falls on the same syllable with respect to word or morpheme boundaries. Recently, Hyman (1975b) has revised his dichotomy of stress types to contrast “free” stress with “grammatical” stress, the latter category including degenerative and morphological stress. This paper explores the feasibility of abandoning these dichotomous treatments of word-level stress in favor of a system which regards different types of stress as points along a continuum.

An analysis of the stress behaviors of 125 languages suggests that simple binary distinctions between stress types are inadequate because they may misclassify certain stress types, and because they fail to account for some well-attested types of stress behavior. For example, the type of “fixed” stress which always falls on a particular stem syllable of a word may ultimately resemble “free” stress by the time several affixes are added to the word. And the type of stress known as heavy-syllable stress (as in Latin) is not easily classified as either “free” or “fixed”.

The alternative system which is being proposed for classifying the stress types of various languages consists of a continuum of stress types. The common denominator of this continuum is phonetic prominence, and the poles of the continuum are “Linguistic Function” and “Linguistic Predictability”. For all the types of stress behavior encountered in the corpus of 125 languages, there is an inverse relationship between degree of linguistic function and degree of linguistic predictability manifested. That is, those stress types which perform more “work” linguistically (e.g., which tell the listener more about a word in terms of boundaries, grammatical class, semantics, etc.) are less predictable phonologically (i.e., their rules for placement are more complex or even indefinable). Conversely, those stress types whose placement is easily defined or predictable provide less linguistic information about a word. For instance, phonemic stress (1975) (i.e., stress completely unpredictable phonologically, provided completely contingent on stress sensitivity) is the extent to which such stress sensitivity may be equivalent to a general factor of intelligence. Two empirical studies are reported. The first is based on 150 Iranian subjects tested in Tehran, Iran. Subscores on the Test of English as a Foreign Language (TOEFL) and on a close test and dictation score for the native language were derived, and were examined by factor correlation techniques. Results confirm E2. The second study, not yet complete, is based on 107 foreign students at Southern Illinois University. TOEFL subscores, as well as subscores on the placement exam used by the Center for English as a Second Language, a cloze test, and the Foreign Service Institute interview schedule are included in the planned analysis.


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Two Mutually Exclusive Hypotheses about Second Language Ability: Factor Analytic Studies of a Variety of Language Tests

Two hypotheses have been proposed to explain the variance on language tests taken by second language learners. First, it has been argued that language proficiency is separable into components either related to linguistically defined categories (e.g., phonology, syntax, and lexicon) or the traditionally recognized skills (e.g., listening, speaking, reading, and writing). Although these components are believed to produce substantial overlapping variance on language tests designed to assess them differentially, it is claimed that tests of a certain component (e.g., lexicon, or listening skill) should also produce some meaningful variance unique to that component and not overlapping with similar unique variances associated with tests of different components. This hypothesis (E1) has been discussed in several major publications on language testing (e.g., Lado, 1961, Clark, 1972, Jones and Spolsky, 1975, and Brown, 1976). A second hypothesis (E2) is that language ability may be a more unitary factor such that once the common variance on a variety of language tests is explained, essentially meaningful variance attributable to a particular component will remain. Evidence for this second alternative has been presented by Oller (1976) who showed that all of the variance on several versions of the UCLA ESLPE (fine sub-parts intended to measure different skills or components of skills) plus various dictations and cloze tests was accounted for by a single factor. If E1 proved to be the better of the two alternatives, it would remain to determine how much variance is attributable to specific components and how much is common to all language tests. If E2, on the other hand, is preferred, the significant remaining question is the extent, to which second language ability, and by implication first language ability as well, may be equivalent to a general factor of intelligence. Two empirical studies are reported. The first is based on 150 Iranian subjects tested in Tehran, Iran. Subscores on the Test of English as a Foreign Language (TOEFL) and on a cloze test and dictation score for the native language were derived, and were examined by factor correlation techniques. Results confirm E2. The second study, not yet complete, is based on 107 foreign students at Southern Illinois University. TOEFL subscores, as well as subscores on the placement exam used by the Center for English as a Second Language, a cloze test, and the Foreign Service Institute interview schedule are included in the planned analysis.


The Metaphony of /ɛ/, /œ/ in Central and Southern Italy

Although the metaphony (umlaut) of /œ/, /œ/ results in [i], [u] in all the metabolizing dialects of Central and Southern Italy, that of /ɛ/, /œ/ does not exhibit such uniform results. The various monophthongs and diphthongs can be accounted for by assuming two original results: raising to [i] [o] and diphthongizing to [ie], [ou], with no connection between the two. Rohlf and Meyer-Lübke have espoused this view. A second view, the diphthongizing hypothesis, held by Schirru, is that all dialects originally diphthongized; a third, the raising hypothesis, held by Lausberg and Kengel, is that all dialects originally raised. The purpose of this paper is to show that the raising hypothesis is inadequate and to present evidence, hitherto ignored, in favor of the diphthongizing hypothesis.

Advocates of the raising hypothesis cannot adequately account for the appearance of diphthongs. Lausberg's structural account, which attributes their appearance to a desire to avoid confusion between primary /œ/, /œ/ and secondary [i], [u], fails because the latter appear only in the environment for metaphor while the former appear as [i], [u] in that environment; so there is no possibility of confusion. Kengel's purely phonetic account links the appearance of the diphthong to the strong stress accent of S. Italian dialects. If it were correct, one would expect primary /œ/, /œ/ to diphthongize also since they are phonetically indistinguishable from secondary [i], [u]; they do not diphthongize, however.

The evidence in favor of the diphthongizing hypothesis is the existence of a dialect on the border of the area having monophthongs that is in the process of monophthongizing its metaphonic diphthongs. The data for this dialect is taken from the Linguistic Atlas of Italy and Switzerland. At point 615, Leonesa (Kếtsh), /œ/ in the environment for metaphony appears as [ie] (e.g., [viənt]), [fjèsnu] except after /ɛ/ where it appears as monophthong [e] or a diphthong with weak first element [e] (e.g., [œu], [œulnu]). /œ/ in the environment for metaphony is at a more advanced stage of monophthongization; [o] appears everywhere (e.g., [gœnσ], [nöu]) except after bilabials, where we find the diphthong [œo] (e.g., [nœ:gu], [mœ:ört]).

Kengel, E. Umlaut und Diphthongierun... Osgon 1936.

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The Explanatory Potential of Voice Register Theory

The explanatory potential of Voice Register Theory is so remarkable that a summary of its most promising developments is overdue. The single opposition - constricted vs. expanded pharynx - most simply described as accomplished by advancing or retracting the tongue root (ATR vs. RTR) accounts for the following:

1. Breathy (ATR) vs. creaky (RTR) voice quality in such languages as Sedang and Halang (Mon-Khmer) and some languages of India.
2. The Indic voiced aspirates - bh, dh, gh (ATR).
3. The extensive reflexion of consonants in Tamil and other Dravidian languages (RTR).
4. Turkish and Mongolian vowel harmony. ATR gives the front set, RTR the back set.
5. Two-pitch tone languages such as Chepang (Tibeto-Burman). ATR lowers, RTR raises the pitch.
6. Languages such as Thakali (Tibeto-Burman) with more than two tones. A contraction of two successive A syllables gives a low, of two successive R syllables gives high, of A followed by R gives rising, of R followed by A gives falling.
7. Appearance of the "wrong" features in reflexes of obviously cognate words from two related register languages. Different register harmony rules in the two languages result in varying dominance or recensiveness of register features.
8. The incredible vowel inventories of languages like Khmer and Burmese (M-K). A three-vowel language with two registers may have 6 different vowel qualities in each of two successive syllables. Contracting the two into one without loss of contrast is accomplished by preserving 36 (6 x 6) different possible vowel qualities.
9. Four laryngeals in a language such as Jingshpaw-Kachin (T-B), in which voiceless stops may close high pitch syllables, voiced stops may close low pitch syllables, glottal stop andsh may close either.

The principal value of the insights of this theory lies in the relating of phenomena previously considered unrelated.
On the Alleged Differences Between Word Formation Rules and Lexical Redundancy Rules

Aronoff (1976) attempts to provide a description of morphology which is compatible with the framework of generative grammar. The central part of this system contains Word Formation Rules (WFRs) which operate after the rules of syntax and (for the most part) before the phonological rules. Through these WFRs, morphologically more complex words are built up from less complex ones.

Jackendoff (1975) uses another approach. He defines an evaluation metric which counts independent information in the lexicon and uses redundancy rules (RRs) to capture regularities (full or partial) which exist in the lexicon, thereby reducing the amount of independent information there.

The two systems aim in somewhat opposite directions. Aronoff is more interested in word formation and has only a little to say about word analysis, while Jackendoff discusses both, leaving only a little for word formation. Both argue that to a large extent, the two types of rules are inverses of each other, but Aronoff claims that Jackendoff has 'no external constraints on the notion redundancy rule', whereas his own RRs are limited to just the WFRs.

This paper attempts to show that there need not actually be a difference between the descriptions the two systems make and that the two models approach being notational variants.

In several ways, the systems are clearly equivalent, e.g., the lack of extrinsic ordering of the rules, the existence of full words in the lexicon (as opposed to morphemes), the handling of back formations. Some of the similarities are observed, however, because of the different concerns of the systems. This paper will discuss some of these.

In general, Aronoff has paid attention to the more productive rules, while Jackendoff has worried more about the less general phenomena. So, for instance, Jackendoff's lexicon will have to include certain abstract factors relating RRs to each other to form a history for word formation. The rules are in a given case, whereas Aronoff will have to specify how non-productive a WFR must be before it ceases to be a rule at all.

The major point of this paper is that when Aronoff claims that by limiting the scope of the WFRs the scope of the notion redundancy rule is automatically reduced considerably, and to a point where it embodies an interesting claim, he is overestimating somewhat, since each WFR not only specifies a phonological operation, but also contains a list (of indeterminable length) of possible forms of the base, each with 'some index of productivity and [semantic] coherence associated with it'. Furthermore, any other stem not listed may also undergo the rules as long as it is subject to a negative condition on the WFR, presumably also with a coherence index. This greatly expands the possible generalizations which can be captured even with this supposed restricted notion of RR.

Corresponding to WFR's indices of productivity, each RR in Jackendoff's lexicon has a list of referent (based on its productivity), which indicates how much of an actual saving the RR will produce in the total information count of the lexicon. So, many of the regularities expressed by Jackendoff's RRs are so weak (i.e., costly) that they do little to reduce the information content of the lexicon, in effect admitting that they are not much worth capturing. While these two models make many non-overlapping empirical claims which must still be investigated before declaring that the two are notational variants, their basic workings are potentially very similar and other external considerations (such as the implications for the rest of the grammar) should perhaps be valued in judging which of these can be the more enlightening for future research.

Aronoff, Mark (1976) Word Formation in Generative Grammar LI Monograph
Jackendoff, Ray (1975) Morphological and Semantic Regularities in the Lexicon

Quapaw is a member of the Dhegiha subgroup of Siouan Languages. The last speaker able to produce sentences not previously memorized died in 1975. Many non-speakers can still produce word lists and sentence fragments, but with phonological inventories that have been systematically reduced, series by series.

The reductions are not simply those that would result from an extreme case of Anglicization however. In the main, conflations have produced a less marked but nonetheless recognizable Quapaw inventory. In a few instances changes clearly matching English inventory and pattern are noted.

In general the mergers are as follows. (1) Glottalized fricatives are realized as the corresponding plain fricatives. (All speakers.) (2) Glottalized and aspirated stops merge with the corresponding tense (geminate) unaspirated stops. N.B. that Anglicization would have resulted in a merger with the more English-like aspirates. (Speakers one generation removed from fluency.) (3) Retrollex shibillants de-retrollex. (Speakers two generations removed from fluency.) (4) Voiceless lax stops voice sporadically (first generation) or generally (second generation). Voicing of this series occurred in closely cognate languages prehistorically however, and was already in progress in Quapaw 150 years ago. (5) Nasal vowels denasalize sporadically. (Second generation from fluency.) (6) \( A \rightarrow B / V \). But is better preserved in clusters where it may assimilate to place of articulation of the following consonant. (All speakers.) (7) Vowel quality generally preserved, but, (8) word final a and e both centralize to ə. (Second generation from fluency.)

The study of language death can contribute materially to our understanding of synchronic and diachronic phonology. (Cf. Dressler, 1972) Along with the study of acquisition, aphasia, drunken speech, pidginization, regular historical development, statistics from the phonological inventories of the world's languages, etc., the phenomena observable in language death deepen our understanding of markedness and linguistic change.

References:
On Constraining the Theory of Exceptions

One way a lexical item can be exceptional is to fail to condition (rather than fail to undergo) some phonological rule. In The Sound Pattern of English (Chomsky & Halle, 1968:380), such exceptional items are marked with a distinctive, such as [4D], which triggers a contextually restricted readjustment rule; this readjustment rule then introduces the appropriate negative rule feature, e.g.:

\[ V \rightarrow [\text{rule n}] / [4D] + C_0 \]

Kisseberth (1970) and Coates (1970), however, point out that the readjustment rule approach allows for the possibility that exceptional morphemes may block a rule's application even though these morphemes form no part of the input to the rule. Thus, if rule n had no effect of simply streaming morpheme initial vowels (\( V \rightarrow [\text{stress}] \)) + C_0, the readjustment rule stated above could block g's application even though the configuration of preceding morphemes is presumably irrelevant. Since no exceptions of this sort are known to occur, i.e., the offending morpheme is always at least a potential input to the rule whose application it blocks, Kisseberth and Coates abandon the readjustment rule approach and propose instead that environmental exceptions be handled by context rule features of the form [context rule m]. As is empirically warranted, this device assures that such morphemes will always be within the domain of the rule to which they are exceptions.

The purpose of this paper is two-fold. First, it is argued that neither the readjustment rule approach nor the context rule feature device is sufficient to account for certain violations of regular vowel harmony in Turkish. Specifically, in this language all vowels in a word generally agree in their value for the feature [back]. (Although loanwords frequently violate this restriction, vowels in suffixes attached to such words in KAL's literature generally agree with the backness of the last vowel in the root.) However, there are some roots in which the last vowel is front that take back-vowel suffixes (e.g. fekv 'top', fekvê 'the top'), and still others in which the last vowel is back that take front-vowel suffixes (e.g. hafiz 'suppression', hazi 'the suppression'). To claim that these two classes of exceptions both fail to condition regular vowel harmony (e.g. hafiz 'suppression') is insufficiently defined, and that since in KAL's literature the semantic property of presupposition depends on it directly, that option is also insufficiently defined.

Also essential to KAL's thesis is their claim that the utterance meaning of a sentence token is formally representable as the grammatical meaning ('context-free meaning') of a sentence type different from the sentence type for that token. Thus, for example, the occurrence of a sarcastic uttering of (4)

(4) John is a fine friend.

a pragmatic function determines the utterance meaning as identical to the grammatical meaning of the sentence type (5):

(5) John is a poor friend.

We claim, contrariwise, that the utterance meaning of a sarcastic rendering of (4) is not adequately expressed as the meaning of any sentence type, and that a sarcastic (ironic, etc) meaning can only arise out of a sarcastic utterance and can never be context free and can therefore never be a sentence type meaning. Support for this claim comes from the fact that (6a), when the first clause is uttered sarcastically, is totally incongruous, whereas (6b) is quite ordinary.

(6) a. John is a fine friend, so don't ask him for a favor.

b. John is a poor friend, so don't ask him for a favor.

Other examples (some involving indexicals) also suggest that there are utterance meanings that can not be mapped onto sentence type meanings in the way KAL propose. If this indeed is the case, then the entire matter of how meanings are assigned to tokens is reopened, and this is a reevaluation of the role of presupposition in the grammar.
Maximization and Recoverability of Deletion

As is well known, there are many patterns of ellipsis in the English comparative clause. Two of these are illustrated in (1) and (2). Sentences such as

(1) Annie drank more scotch than Jim drank. [θ = much scotch]
(2) Annie drank more scotch than Jim drank. [θ = x much]

are generally derived by transformations known as Comparative Deletion (CD). This represents the phenomenon of Subdeletion (SD), where the deletion target is a sub-part of a major pronominal constituent.

Bresnan (1975, 1976) (8) proposes that sentences such as (1) and (2) are derived by means of the same deletion rule (CD-SD). The structural description of this transformation contains the term shown in (3) as a target predicate (i.e., the deletion target). The

(3) \[ θ = \text{variable value of (3)} \]

in the derivation of (1) is \[ \sqrt{3} = \text{variable value of (3)} \]

(W is non-null) in the derivation of (2). The value of (3) is simply \[ \sqrt{3} = \text{variable value of (3)} \]

(W is null). Further, demonstrations show how her formulation of a maximization principle, her Relativized A-over-A Principle, which ensures that the value of a particular target predicate is maximal with respect to adjacent context predicates, interacts with this analysis to predict such facts as the ungrammaticality of (4).

(4) *Annie drank more scotch than Jim drank. [θ = x much]

Crucially, B's proposal requires that RAOAP maximization be dependent upon the principle of recoverability of deletion (ROD). ROD must rule out certain proper analyses. First, RAOAP must ensure that of the remaining proper analyses, only one wherein the value of the target predicate is maximal is admissible. Assuming a collapsed rule of CD-SD, this is necessary to guarantee that only the maximal deletion target is actually deleted (e.g., to allow (2), but block (4)). There is evidence against the applicability of the two principles in question. Cruz (1973) observes the ungrammaticality of sentences like (5), involving Verb Phrase Deletion

(5) "I couldn't lift this rock, but I know a boy who can θ and bend a crowbar, too."

VPD thus obeys one part of Ross' Coordinate Structure Constraint (CSC). One of the primary motivations for A-over-A in the first place, however, is to establish a general principle which has CSC as a particular case. Thus (5) should, in B's theory, be explained by RAOAP. But in (6), VP is non-recoverable. Assuming the aforementioned dependency, therefore, incorrectly allows sentences like (5) to be generated.

(6) \[ VP \downarrow \text{I couldn't lift this rock and VP bend a crowbar} \]

rated. It must assume some version of CSC in addition to RAOAP.

This lack of generalization can be avoided by assuming the independence of ROD and RAOAP. Given two proper analyses, if the target predicate's value is non-maximal in one, and non-recoverable in the other, the proper analysis will be RAOAP. This correctly accounts for (5). But this means that (4) cannot be ruled out by RAOAP, as happily result, many speakers find such sentences simply "redundant" rather than totally unacceptable. The position that (4) should not be ruled out by an immutable metatheoretic principle such as RAOAP is further supported by the recoverability of such sentences in contexts like (7).

(7) Speaker A: Annie drank more scotch than Jim drank bourbon.
Speaker B: No, you've got it all wrong. Annie drank more scotch than Jim drank scotch (not bourbon).

A revision of RAOAP which accommodates these facts is proposed, and a few more general remarks as to the nature of the interaction of general constraints on rule application are offered.
Evolution of Stress and Vowel Length in Sri Lankan Portuguese

This paper will demonstrate that the Batticaloa dialect of Sri Lankan Portuguese (and Indo-Portuguese creoles) has undergone a typological change from a language in which vowel length is a predictable consequence of stress to one in which vowel length must be lexically represented, but stress is predictable.

In Standard Portuguese (SP) the position of stress must be indicated in the lexicon for at least some items. Stressed vowels are then slightly lengthened by a low-level rule. In Batticaloa Portuguese (BP) a variety of phonological changes and borrowings have brought long and short vowels into contrast:

1. a) BP [े] 'she' < SP ela
2. b) BP [४] 'skin' < SP pele
3. c) BP [ॣ] 'today' < SP hoje
4. d) BP [ॲ] 'eye' < SP olho
5. e) BP [।] 'get down' < SP descer
6. f) BP [६] 'mass' < SP massa

Stress and vowel length remain closely interrelated. All surface long vowels are stressed, and a word may contain at most one phonetically long vowel. Stress falls on the last underlying long vowel of a word, or on the first vowel of a word containing no long vowel. A later rule reduces all unstressed long vowels to short vowels, giving alternations such as those in 4) and 5). It will be noticed that in non-initial syllables underlying short vowels are always unstressed; underlying long vowels may be strengthened; their length (represented by [ ]), however, is less than that of long initial syllable vowels (represented by [ ]). It is in fact possible for stressed vowels in non-initial syllables to lose their length entirely, since the surface feature of stress remains as the indication of underlying length. This phenomenon is particularly likely in closed or final syllables and in certain allophones. This distribution of stress and length results in the alternations in 6) and 7) when a prefix is added to an item with an initial syllable.

7. a) BP /dəsə/ → [dəsə] 'two'
8. b) BP /dəzəːn/: /dəsə-r = dozes/ 'second'
9. c) BP /ɜː/ → [ɜː] 'eye' (= 2 b)
10. d) BP /ɜː/ → [ɜː] 'see'
11. e) BP /dːjə/ → [dːjə] 'day'
12. f) BP /medːjə/: /medːjə = medius/ 'midday'
13. g) BP /tɛmː/: /tɛmː 'is'
14. h) BP /lʊtɛmː/: /lʊtɛmː = lotem/ 'will be'
15. i) BP /munːtɛmː/: /munːtɛmː = nuntem/ 'is not'

To recapitulate: vowel length must be lexically represented in BP, though on the surface it serves as the sole feature distinguishing minimal pairs only in initial syllables. In non-initial syllables the predictable feature of stress always coincides with length and may even take over its function.

As Batticaloa Tamil (BT), in which all BP speakers are bilingual, has both contrastive vowel length and predictable stress, it is natural to attribute to its influence the evolution of the features in BP. The lengthening of origin (see arrows in 8) and 9) and arguments for a period in which the earlier situation (initial stress) is obtained. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening. The change to the new system must, such as 10) do not show this strengthening.

Evolution of Stress and Vowel Length in Sri Lankan Portuguese

The purpose of this paper is to propose an integrated theory of Chinese adverbial placement in which several discrete generalizations previously proposed can be subsumed under one single principle and to show that adverbial scope in linear modification in Chinese and probably in other languages can be understood basically in terms of temporal or spatial range.

The proposed principle can be stated to the effect that if the state of affairs or action denoted by the verb occurs within the temporal or spatial range of the state expressed by the adverbial, then the adverbial must be placed before the verb; if it doesn’t, then the adverbial must be placed after the verb.

It will be shown that this principle accounts for the following and several other phenomena of Chinese adverbial placement.

(A) While time adverbs and adverbial clauses can only occur before the verb, duration and frequency adverbs and until clauses can only occur after.

1. (1) ta nuótián zou-le He left yesterday.
   *ta zuó-li nuótián
2. (2) ta zuó-li san tián le He has left for three days.
   *ta zuó-li san zuó-le

(B) While preverbal place adverbials denote the locations of actions and states of affairs, postverbal ones denote the locations of participants of actions.

1. (3) ta zài chún-făng-1 li He is crying in the kitchen.
   *ta ku zài chún-făng-1
2. (4) ta dào zài shuí-li He fell in the water.
   *li ta dào zài shuí-li

(C) With respect to instrumental and manner adverbs, the preverbal position is used in the description of one particular event, whereas the postverbal position is used for general statements.

1. (5) ta hén kuài de pào-le He ran away very quickly.
   *pào-le de hén kuài
2. (6) ta pào de hén kuài He runs fast.
   *ta hén kuài de pào

(D) For those manner adverbs describing mental states of actors, the preverbal position entails that mental states accompany actions, the postverbal position entails that mental states exist after actions.

1. (7) ta hén goáíng de wān He is playing very happily.
   *ta hén de goáíng de wān
2. (8) ta wān de hén goáíng He is very happy from playing.
   *ta wān de hén goáíng
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morphologization of Palatalization in Russian Verbs

Certain attested historical Slavic sound changes have been proposed as synchronous phonological rules of Russian, for example by Halle and Z. M. Lightner. Their analyses (in the transformational generative framework) have accounted for the velar-palatal alternation in Standard Russian, as in /pek/ 'I bake', /peuko/ 'you bake', by positing the underlying root peko+ and a rule (paralleling the historical development) converting k → ɣ before front vowels. This necessitates further abstraction, since the 1st conjugation theme vowel, ɣ in /peko/, must be considered an underlying ɣ, converted in its turn to ɣ (after the k- ɣ rule applies) by a rule paralleling the historical Slavic e-ɣo sound change. Moreover, these abstract underlying forms and opaque ordered rules must still be supplemented by a transformational cycle to yield the correct surface forms.

Such analyses have been challenged by natural generativists, for example B. Derwing and J. Hooper, on the grounds that unsophisticated native speakers cannot be expected to set up such abstract forms and rules based solely on the available data (actually heard surface forms). It is more reasonable to suppose that surface alternations which are remnants of formerly regular conditioned sound changes, their conditioning environments having been obscured by later changes, become morphologized, i.e., associated directly with morphological features (e.g., present tense) and relexicalized, rather than associated abstractly (phonologically) with "underlying" (historical) forms. The presence of palatals before back vowels (/peko/ is then the predicted result of the morphologized velar palatalization rule, and not the accidental result of a complex, ordered, cyclical derivation.

In addition, abstract, phonologically-based analyses can be challenged on the grounds that they do not account for linguistic change as evidenced by dialect variation. For example, in some dialects the verb 'bake' has present forms /pek/, peko/. These may be easily explained as resulting from the generalization of a morphologized velar palatalization rule, but there is no phonological basis for the presence of ɣ before ɣ. Also, in other dialects the present forms are /pek/, peko/. Their derivation from the Standard Russian forms may also be explained as resulting from morphologization and relexicalization: when the phonologically-conditioned association between surface alternants is obscured, speakers tend to associate one of the alternants with the meaning, thus reestablishing patterned regularity on the surface.

On Interpreting "The Indian Interpreter"

In 1912 J. Dyneley Prince published, with a detailed analysis, a list of 261 words and phrases that constitute the majority of known attestations of a Traders' Jargon once used between Delaware River whites and Indians. This list, which Prince found next to a deed dated 1684 in a manuscript volume he calls the Salem (N. J.) Records, is entitled "The Indian Interpreter". Lexically, the material is almost entirely Delaware, though with some dialect variation. Otherwise the Jargon is, according to Prince, "almost grammatically and based chiefly on English construction..." (508). In this paper I present some results of a morphosyntactic study of the 83 items in the list that contain more than one morpheme; and I discuss the implications of these results both for assumptions about this Jargon's origin and for general theoretical questions about the nature and origin of pidgin and creole languages.

In spite of the paucity of data, the Jargon material clearly exhibits a number of typical pidgin-like features, in particular a morphology simpler than that of either language Prince mentions as a contributor to its structure, Delaware or English. But the grammar, what there is of it, matches our expectations neither for English (even a 'simplified' version) nor for any of the well-known pidgins and creoles with European vocabulary bases. The two most striking deviations are the ordering of negative particles relative to a subject pronoun and a verb, and the relative positions of a verb and its object:

#220. matta ne kamata neg. 1st steal sg.
'No, I did not steal it.'

#157. shalea oon hatta more snow have
'have abundance of snow, hail, ice'

Such constructions give a strong indication of various things this Jargon is not: 'based chiefly on English construction'; a pidgin whose structure results from the direct or indirect influence of an unbroken chain of pidgins and creoles going back to the original Lingua Franca (the monogenesis hypothesis); or a pidgin which, like other pidgins and creoles, is the result primarily of the operation of universal tendencies of language structure.

I suggest that it is, instead, a pidgin which, like other pidgins (and creoles), derives its grammatical structure primarily from the typologically unmarked and shared marked features of the native languages of its original speakers. I also claim that sociolinguistic as well as linguistic considerations argue against the participation of any Europeans in its original development; the important position occupied by the Delaware Indians in political and trade relations among Algonquian and Iroquois tribes, just before and during the period of European settlement, offers a much more likely setting for the appearance of a Delaware-based pidgin. Finally, I give examples of Algonquian and Iroquois constructions that are, I believe, reflected in this Traders' Jargon.


The Origins of Burmese Creaky Tone

The largely random distribution of 'creaky' tone in Modern Rangoon Burmese can be explained by the successive layers of historical development. As the morphophonemic variant of otherwise level and heavy-toned words, this tone occurs in specific syntactic and semantic slots; as the tone of somewhat less than 400 words, it occurs primarily with verbs, nouns, and particles but also with adverbs, pronouns, vocatives and kinship terms, and interjections.

Comparative evidence establishes that the initial layer of about 50 forms was inherited from proto-Lolo-Burmese tone *3. The additional 350 forms represent a development internal to the history of Burmese. Internal reconstruction shows that the tone developed through the phonetics of the juxtaposition of old level-toned, initially-voiced roots and the general particle *k-ray. The morphophonemically varying creaky tone developed from *k-ray in the pre-head slot of modifier-head constructions; the lexical creaky tone developed from juxtaposition to a post-verbal use of *k-ray. Naturally verbs are the largest group with lexical creaky tone. Native nouns marked with creaky tone, the next largest group, developed historically from originally verbal creaky-toned roots. Similarly most frequently creaky-toned particles evolved from creaky-toned full verbs. Adverbs also display an earlier verbal origin.
Social Stratification and Linguistic Forms of Factory Workers

This paper examines language in a factory setting and focuses on: (1) language workers use to express attitudes toward jobs, work areas and coworkers (Labov 1966; Hall 1966; Hymes 1974); (2) communicative behavior workers exhibit in relation to their socially defined status (Mills 1956; Leopold 1970; Fishman 1970); and (3) speech forms workers use for particular situations and styles (Bernstein 1964; Bright 1966; Gumperz, Hymes 1974).

The paper reports that: (1) workers socially stratify their work environment with the labels they use for other workers and jobs (Labov 1966); (2) there is a correlation between the social stratification the workers recognize and the linguistic behavior they exhibit (Gumperz 1964); and (3) the preferred linguistic forms for careful and casual speech of workers may be correlated with the social categories they represent (Labov 1966; Gumperz, Hymes 1974).

A Chinese factory was examined as a speech community using a case method of research with personal and participant observations and interviews. The characteristics and background of the community, the factory, and the workers were explored (Arensberg 1947; Beynon, Blackburn 1972). A sample of 151 informants was selected by the criteria of plant seniority and departmental affiliation (Tway a,b,c 1975). A reading isolated the dialect of informants as careful speech and a questionnaire presented in a conversational manner probe the workers' environments and their definitions of them (Labov 1966; Shuy, Wolfram, Riley 1968). Photographs of workers in the factory were used to stimulate work-related conversations and the help elicit casual speech during the interview (Tway a,b,c 1976). The photographs also provided information about the non-verbal communication of workers (Hall 1969; Sebek et al. 1964; Birdwhistle 1970). Conversations observed outside the interview were used to support the analysis of speech styles.

The results of the study support certain notions about communicative behavior and socio-economic phenomena which the previous studies cited above have shown, and validate the usefulness of certain sociolinguistic field techniques discussed above. The study also contributes new information about the relationship between work, status and language, and new information about field techniques which can enhance future sociolinguistic studies.

Autonomous Phonology, Phonemic Overlap, and the Red Herring of Invariance

Chomsky (1964), in the course of a lengthy attack on the principles of "taxonomic" phonemics, takes up Bloch's (1941) celebrated example of ostensibly complete--and thus inadmissible, in autonomous phonology--phonemic overlapping. The critical case is from Bloch's own Chicago-area dialect, where pod and pad are homophones, but bomb and balm, gorry and gar, etc., contrast, solely in vowel length. Chomsky accepts Bloch's assessment of this as leading, if binuqueness or (its hyperacoustic, distinctiveness) is to be preserved, to a "loss of symmetry" and "destruction of the generality of rules." He therefore gives it as a reason for abandoning the traditional phonemic level--between the morphophonemic and phonetic ones--in phonological analyses.

Careful analysis of this line of argument reveals that, pace Bloch, the example exhibits only partial, i.e., acceptable, phonemic overlap. The obvious, symmetrical, generality-preserving solution turns out to be also binuquious. It offends only against the improper, "Galvanist" doctrine of invariance, which would rule out even partial phonemic overlap (that Bloch later espoused this doctrine is beside the point). Hence Bloch's example, which Chomsky cites as an argument against binuqueness, is really just another argument against invariance; Bloch has led himself and Chomsky into error.

The importance of this discovery lies in its synergistic consistency with a pattern of related ones: Lamb (1966) demonstrated that Balle's (1959) famous Russian obstruents example fails to impugn binuqueness, and Chomsky's argument based on Rockett's (1951) Patakas example is similarly vitiated. In fact, none of Chomsky's arguments against binuqueness, or any other essential principle of autonomous phonology, holds up under scrutiny. So the consequences of accepting binuqueness, and positing a separate phonemic layer--far from being, as Chomsky avers, "quite devastating, for anyone concerned with descriptive adequacy"--are wholly acceptable to those who dare the vaunted explanatory power of the "hyperacoustic" and "transformational cycle in phonology." Indeed, it is easy to show that since binuqueness can be retained as a condition of phonological analyses without compromising descriptive adequacy, it follows from general considerations of scientific parsimony that it MUST be retained. These facts cast significant new light on controversial questions in phonological theory and augur a renascence of autonomous phonology.

REFERENCES

The Vedic Trochaic Gāyatṛ

The Vedic trochaic gāyatṛ xxxx/xxxxu-ux in that it makes more frequent use of a caesura after the fourth or fifth syllable. A caesura occurs in 94.2% of trochaic gāyatṛ verses, as opposed to only 71.4% in gāyatṛ verses.

We are, of course, dealing with vastly different corpus sizes. The corpus of clearly octosyllabic trochaic gāyatṛ verses is nearly 500; the corpus of regular octosyllabic verses (including anuññubh, pankti, and mahañpankti verses) probably approaches 12,000. Nevertheless, the difference between 94.2% and 71.4% is so great that it seemed to call out for an explanation. And an explanation there was.

As Nagy has observed (Comparative Studies in Greek and Indic Meter, 1975, p. 166), the basic form of the Vedic octosyllabic is represented by xxxxu-ux. This coincides exactly with what Watkins ("Indo-European Metrics and Archaic Irish Verse," Gallica, 1969, p. 295) has termed the "irregular" glyconic in Greek.

There is a lack of specificity in the first four syllables of this form, contrasting with specificity in the last four. Thus, in the Rig-Veda, word-end in the regular octosyllabic occurs at its expected frequency. Compare the trochaic gāyatṛ xxxx/xxxxu-ux. In this, the contrast between lack of specificity in the first four syllables and specificity in the last four does not exist. Thus, a caesura divides the beginning from the ending of the line.

There is also an explanation for most of the 5.8% of the trochaic gāyatṛ lines that do not show word-end after syllables four or five. The vast majority of these show a compound seem occurring either after the fourth or fifth syllable. The few that fail to show a compound seem can be explained in other ways.

VIII.2.13a revād devāstottā --/--v--/-- dor Aumāt des Sangats abgud

is, according to Gellner ed loc., "ein deutlicher Wink an Indra." The repetition of revād reinforces Gellner's position, as does the line's failure to show word-end after either the fourth or fifth syllable.

VIII.81.7c āsāstārāyev adeva u-uv-uv-uv--

is, coming from the lips of a brahman, an oxymoron. Failure to show the appropriate caesura reinforces this interpretation.

Finally, VIII.79 is a poem sui generis. The unknown author has rebelled against the traditions of the category of trochaic gāyatṛ. He has created a poem which treats trochaic gāyatṛ as behaving in a manner identical with regular gāyatṛ.

Thus, a dichotomy is established between trochaic gāyatṛ and the regular octosyllabic.

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Interplay of Voice, Aspect, and Mode: The Semantics of Verbal Prenasalization in Malay

This paper challenges the widely-held current opinion that the essential semantic difference between plain (with zero or non-nasal prefix) and nasalized (with nasal prefix) verb forms in Malay is one of voice, or, according to some authorities, focus. Intensive fieldwork on the Malay dialect of Jakarta, Indonesia, reveals instead that the distinction between plain and nasalized verb forms—a crucial feature of the verb and, hence, of many utterances in Malay—lies in a complex interaction of the semantic categories of voice (passive vs. active) or focus (goal-focus vs. agent-focus) together with aspect (simple vs. habitual, punctual vs. durative, static vs. dynamic) and mode (actual vs. potential, executed vs. attempted), with the precise meaning dependent upon the context.

Examined are pairs such as ngeliat and (di)liat—'see' vs. 'be seen' according to contemporary interpretation—where in actual fact the semantic difference is sometimes 'watch, observe' (durative aspect) vs. 'see, catch sight of' (instantaneous aspect) or 'able to see' (potential mode) vs. 'see' (actual mode), as well as 'see' (active voice/agent focus) vs. 'be seen' (passive voice/goal focus). In succinct terms, the basic semantic contrast is between a vague, general activity and a clear, specific act. The present analysis is seen to agree with that of some earlier scholars of Malay (esp. Winstedt) rather than that of most modern investigators, whether their approach be structural or transformational-generative.

These semantic phenomena in a western Austronesian language are briefly compared to similar recently reported features in eastern Austronesian (Polynesian) languages. Reference is then made to hypotheses, generally accepted among Indo-Europeanists, of the original identity of the Proto-Indo-European perfective aspect and mediopassive voice, and of other relationships between verbal categories (esp. aspect, tense, and mode) in the development of the Indo-European languages. The conclusion is that such fundamental verbal categories are not necessarily as distinct formally or semantically as we often think; the diachronic evidence from Indo-European and the synchronic evidence from Austronesian, especially Malay, show an unappreciated ambiguity and possible crossover between categories which deserve closer attention in our attempt to understand semantic structure and semantic change.
The Development of Clitics

I. Clitics are elements whose behavior is jointly conditioned by syntactic and phonological properties. The multiplicity of regulating factors predicts the existence of a gradient of cliniteness rather than the binary opposition of clitic vs. non-clitic which has been commonly accepted. Furthermore, the assumption that clitics are naturally connected to the syntactic surface is called into question since both non-superficial syntactic and non-underlying phonological factors are crucial for clitic behavior. The evolution of the relevant aspects of the clitic systems from Latin to Romance (here represented by Spanish) will be used to substantiate these claims.

II. Clitics occur in two common types:

Type A: They appear as unstressed elements in the surface string wherever a corresponding non-clitic form of the same constituent could occur. Such clitics are phonologically derived from their (stressed) non-clitic counterparts by productive reduction rules (e.g., Sp. 'lo' > 'l')

Type B: They occur only in one (or more) specified position(s) in the surface string (second position, with verb, or other) as a result of having undergone a clitic placement rule to this effect. Such clitics cannot necessarily be derived from strong counterparts by productive phonological reduction rules (e.g., Sp. 'lo' > 'l' vs. 'lo' > 'l')

Type A and B subsystems may cooccur in a given language; e.g., in Latin A and B, in Romance only B. With regard to type B clitics a language may have two subgroups, one of which is moved to position x, the other to position y (e.g., in Pashto to second position and to the verb).

The first phonological reduction takes place as a function of semantic prominence of the element concerned; the syntactic repositioning in the second step is in response to the low perceptibility of the (now heavily) reduced cliticized element.

III. The type B clitics of Latin disappear in Romance (principle: put verbs first), original Latin type A clitics (e.g., 'be') are still dependent in Medieval Spanish on sentence stress in addition to constituent structure (they followed the following final major constituent: el Cid, lo 'lo' vs. 'lo', lo el Cid, 'and') because they became immobilized in Modern Spanish so as to precede the main predicate; the verb according to morphosyntactic categories (finite vs. non-finite forms, etc.). Similar evolutionary chains of progressive cliticization along the predicted lines will be presented from Spanish.

Providence Island Sign Language

LANGUAGE is not a neatly and clearly bounded universe. The calculation of the potential of or the limits of the ability called LANGUAGE must be based on the range of varieties of actually existing languages. If we consider the more any particular language is systematically atypical, the more that language reveals the potential of language. Therefore, linguistic theory, whose goal is the discovery of the limits of LANGUAGE, is most advanced by the investigation of the atypical and the extraordinary varieties of language.

This paper will discuss one such atypical linguistic system, Providence Island Sign Language. Providence Island Sign Language is employed primarily by deaf people living on a small isolated Caribbean island. The citation of four facts will serve to dramatize the extraordinary nature of PISL: 1) PISL is a manual-visual language rather than an oral-aural language; 2) PISL is not related to any other known Sign language; 3) PISL is employed by a community of signers which is quite unlike the sort of signing community found in industrialized societies (because deaf people are integrated to a large extent into the daily activities of the rest of the island's population). These characteristics indicate that PISL is not only one unique language, but a unique Sign language.

Because the PISL community is extremely small, isolated, and cohesive, the sign code is more context dependent than the sign codes found in industrial societies. Two specific examples illustrate this context dependence: 1) Providence Island signers make greater use of indexic signs for a wider variety of reference than do signers of other Sign languages. Referents that are a part of the common experience of islanders and that are normally visible, such as the ocean, mountains, and towns, are expressed by indexic signs. 2) Facial and/or sound expression plays a more significant role in distinguishing meaning in PISL than in other Sign languages. Facial and/or sound expression not only serves to distinguish such syntactic features as questions and negations but also is an integral part of many signs such as BAD, BOAT, FAST, etc., and in fact distinguishes a number of lexical sets such as DOG, FISH, CAT and HOW, ASK, DON'T-KNOW.

Historical changes in American Sign Language indicates that over time facial expression in a given lexical unit is either lost or transferred into a purely manual unit. The continued common use of facial expression to carry meaning in PISL is another indication of the cohesive nature of the community and of the context-dependent nature of the code.

These two characteristics and others such as handsheat formation, color and kinship terminology indicate the context dependent nature of PISL. This context dependence appears to be a product of isolation of signers and may change with the recent improvements in intra-island transportation, which allows more frequent contact between deaf people from different villages. If the frequency of contact of deaf people from different villages increases with time, we can expect a more context independent code to develop. For example, we would predict a change in potentially ambiguous forms like SLEEP to mean the name of one's own village.
Classification of nouns according to shape is widespread in the languages of the world. Paul Friedrich (1970) argues that "the overt, obligatory morphology of perhaps the majority of the world's languages functions partly to express categories of shape, and that such categories are probably universally present in the semantic substructure of all languages." The numeral classifiers and classificatory verbs of Tzotzil reveal three basic categories: "longish, flatish, and roundish."

In North America, the native languages of the Southeast classify nouns not according to shape but according to observed position. The three Muskogean position verbs, stand, lie, and sit, co-occur freely with animate nouns. Inanimates are more restricted, but their distribution with respect to position verbs makes it clear that the classifying principle is orientation, not shape.

In Siouan, this system has apparently progressed from a position classification, most evident in Chippewa-Winnebago and Mandan, to a more arbitrary shape system in Dhegihan and Biloxi.

In families such as Athapaskan, where shape has been assumed to be primary, position was probably primary historically. Davidson et al (1963) have concluded that the categories clearly shared by all three branches of Athapaskan are just those that correspond to the position verbs of the Southeast: long, fabric-like (flat), and round, in addition to animate. Evidence from Eyak further strengthens this hypothesis of the historical primacy of position. Krauss (1969) reports that Eyak animate nouns are classified according to position and that the Eyak stem -te, cognate with the Navajo class III (animate) neuter stem ti, specifies prone position.

Shape systems, then, appear to reconstruct as position systems. Position classification can also be seen to have been grammaticalized into a complex definite article system indicating shape in Dhegihan Siouan. In Athapaskan, position has combined and intersected with other categories such as number and texture. In North America, at least, the evidence suggests that position is primary and shape derivative.

Realizing the cultural and social value of their native language at a time when their children are no longer learning it, a group of Mohawk teachers at Caughnawaga, Quebec, has devoted considerable time and energy to the construction of a national orthography and effective language classes. Over a period of five years they have studied general linguistic theory, Mohawk linguistics, and pedagogy. Their experiences in applying their theoretical knowledge in the accomplishment of their goals should be of interest to other native groups who share their concerns and to theoretical and consulting linguists curious about the accessibility to a native speaker of his unconscious linguistic knowledge.

The teachers devoted considerable time to the study of general phonological theory and set themselves the task of determining the optimum level of abstraction of phonological representation for their needs. After concentrated practice at a variety of levels, it became clear that the complexity of both the morphologically and phonologically conditioned rules of their language rendered all levels above a traditional phonemic level impossible for them to record or interpret. They found they did not have conscious native speaker intuitions about levels above this, and could derive them only by applying complex linguistic techniques, when they could derive them at all. Since they do not now, and never will have vast quantities of written materials, spellings which must be memorized are not practical. The system they did devise is highly successful; it employs 11 symbols, can be read and written with ease and confidence by native and non-native speakers alike, and has been taught in less than half an hour.

 Speakers are generally unaware of the morphological components of words, particularly of derivational and most inflectional affixes, until sufficiently detailed orthographic representations of forms can be compared visually. Even as experienced analysts, speakers often forget which phonological segments correspond to which semantic features of a word. The knowledge gained through morphological analysis proved indispensable, however, in the construction of effective language courses. Children are now spontaneously producing morphologically correct words which they have never heard.

Most syntactic theory is based on the recognition of the sentence as a fundamental unit. In languages such as Mohawk, which lack strong literary traditions and established rules of punctuation, sentence delimitation is not always obvious. Since all verbs always appear in their full, finite forms, rather than as participles of infinitives, main predicates cannot always be easily identified. Intonation is a good clue to paragraph separation, but cannot be relied upon for all sentence boundaries. This suggests that the concept of the sentence might bear closer examination and refinement, both in Mohawk and in general linguistic theory.
Negative Incorporation in FSL and ASL

Recent research in sociolinguistics has demonstrated the need for looking at language in a dynamic framework, that is, not for imposing the traditional synchronic-diachronic dichotomy on linguistic studies. This paper attempts to test variation theory with historically related visual languages, French Sign Language (FSL) and American Sign Language (ASL), by examining variation in the use of Negative Incorporation in the two languages. Popular opinion states that ASL developed solely from FSL after initial contact in 1816. However, Negative Incorporation presents some evidence that ASL developed from the creolization of FSL and Sign Languages already existing in the U.S. before 1816.

Data for this study was collected from 144 deaf American signers and from 60 deaf French signers. Informants from the U.S. were chosen on the basis of geographic location (northeastern vs. northwestern), parentage (deaf or hearing), age of acquisition of signs (before and after six), and education. The French informants were selected primarily on the basis of region. French deaf informants represented the cities of Paris, Toulouse, Albi, and Marseilles.

The results of this study support viewing languages in a dynamic framework, since traditional static theories have no formal mechanism to handle the inter and intralingual variation that occurred in this study. The patterns of variability were shown to be the same for all signs undergoing Negative Incorporation except GOOD. GOOD undergoes categorical Negative Incorporation in ASL, while no French signers use Negative Incorporation with GOOD. We hypothesize that this problem with the data is due to early creolization in American Sign Language.

Negative Incorporation is a phonological process of assimilation of Verb + Not in FSL. This assimilation began affecting FSL verbs before 1816. Otherwise, there could be no Negative Incorporation in ASL, since ASL NOT has no functional relationship to FSL NOT. ASL NOT probably came from some sign variety in America, since old and modern FSL do not have cognates for ASL NOT. The assimilated Negative forms of FSL verbs remained as single units in ASL.

These lexical units apparently became generalized into a grammatical rule in ASL with the Negative Incorporation of ASL GOOD into ASL BAD during the creolization of FSL and existing varieties of signing in the U.S. circa 1816. FSL and ASL GOOD are cognates. FSL BAD became ASL WORSE. Creolized ASL then had no single lexico-phonological unit for BAD or this unit lost in competition with BAD as a Negative Incorporation of GOOD. GOOD then gradually moved to its appropriate place in the implicational pattern because of its phonological characteristics.

Finally, Negative Incorporation of GOOD has become categorical. Further support for the salience of the Negative Incorporation grammatical rule in ASL comes from overgeneralizations of deaf children's signing and hearing adult hypercorrections. This rapid restructuring of phonological assimilation into a grammatical rule would argue for creolization as opposed to natural internal language change.

By viewing Negative Incorporation in a dynamic framework, we are able to describe the variable usage of Negative Incorporation as a phonological process in FSL and as a grammatical process in ASL, to argue for possible early creolization of ASL, and to show the historical continuum between FSL and ASL despite heavy restructuring.