Linguistic Society of America

FORTY-SIXTH ANNUAL MEETING
DECEMBER 28-30, 1971
ST. LOUIS, MISSOURI

Meeting Handbook
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Meeting Handbook
INTRODUCTORY NOTE

This Handbook has been prepared to serve as a guide to those attending the Forty-Sixth Annual Meeting of the Linguistic Society of America. It is also intended as a permanent record of the papers presented at the meeting.

The Handbook consists of the official program of the meeting and the abstracts, as submitted, of the papers scheduled for delivery. Some of the abstracts are accompanied by handouts.

The abstracts are arranged in the order of the program. An alphabetical index of authors and their addresses appears on page 165.

The idea for the LSA Meeting Handbook was suggested by the Center for Applied Linguistics in 1964, and the first Handbook was prepared for the winter 1965 LSA Meeting in Chicago. The Center subsequently prepared and published the Handbooks for the 1966, 1967 and 1968 meetings. In 1969 the Handbook became an official publication of the Linguistic Society of America, although the Center still assists in its preparation.

Allene Cuss Grognet, editor
Washington, D.C.
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1971 ANNUAL MEETING OF THE LINGUISTIC SOCIETY OF AMERICA
Chase-Park Plaza Hotel, St. Louis, Missouri
December 28-30, 1971


REGISTRATION, Chase Lounge
Registration is $5.00 and includes the Meeting Handbook. The Registration Desk will be open from 7:00 p.m. to 9:00 p.m. on Monday, from 8:00 a.m. to 4:00 p.m. on Tuesday and Wednesday, and from 8:00 a.m. to Noon on Thursday.

LUNCHEONS, Starlight Roof
Tickets for the luncheons must be purchased in advance from the Luncheon Tickets Counter in the Registration Area.

Tickets for the Special Interest Groups Luncheon, to be held Tuesday, are $5.00 and may be purchased until 4:00 p.m. Monday. If you have not already done so, you may sign up for a group at the Luncheon Tickets Counter.

Tickets for the Presidential Buffet Luncheon, to be held Wednesday, are $4.00 and may be purchased until 4:00 p.m. Tuesday.

LSA BOOK EXHIBIT, Chase Lounge
The Book Exhibits will be open from 8:00 a.m. to 6:00 p.m. on Tuesday and Wednesday, and from 8:00 a.m. to 2:00 p.m. on Thursday. See the last page of this Handbook for a list of exhibitors.

LSA MEETING PLACEMENT CENTER, Lido Room
The Placement Center will be open from 11:30 a.m. to 2:30 p.m. and from 5:00 p.m. to 8:00 p.m. on Tuesday and Wednesday; from 11:30 a.m. to 2:30 p.m. on Thursday. If it appears necessary, these hours will be extended.

LSA DAY CARE CENTER, Lucas Room
The Day Care Center will be open from 8:45 a.m. to 10:30 p.m. on Tuesday and Wednesday, and from 8:45 a.m. to 6:15 p.m. on Thursday. The charge is 50¢ per child per hour.
FIRST SESSION

Section One, Khorassan Room A  
Chairman: Charles J. Fillmore

9:00 GABEEELL and ANGELOMALIKOUTI-DRACHMAN (Ohio State): Language acquisition in Greece: Some preliminary findings.

9:30 M. E. SOLBENG (Cornell): The development of sound in Quechua.

10:00 BREAK

11:00 CAROLYN KESSLER (St. Mary-of-the-Woods): Contrasts in the acquisition of syntax in bilingual children.

11:30 PAULA A. TREICHLER (Urbana, Illinois): Form and function in the tense usage of retarded children.

12:00

Section Two, Chase Club  
Chairman: William O. Dingwall

BENJAMIN K. T'SOU (California, San Diego): Reduplication and reduction in Loloish question derivation.

HARVEY ROSENBAM (Texas, Austin): Valley Zapotec: Identical rule for both WH question movement and relativized constituent movement.

BREAK

W. P. LEHMAN (Texas, Austin): Why are OV languages agglutinative?

ROBERT UNDERHILL (Harvard): Remarks on possessives.

JOHN ROBERT ROSS (Language Research Foundation and MIT): Primacy.

JAMES H-Y. TAI (Southern Illinois, Carbondale): A global constraint on adverbial placement in Mandarin Chinese.

SECOND SESSION

Section One, Khorassan Room A  
Chairman: W. P. Lehmann

2:00 MARIA-LUISA RIVERO (Ottawa): Scholastic views on scope.

2:30 CHARLES EHMY (California, Berkeley): More forgotten phoneticians.

3:00 BREAK

3:30 TRENEE R. FAIRLEY (Long Island): e.e. cummings' poetic dislocations of adjectivals and adverbials.

4:00 JAMES C. STALKER (Michigan State): Poetic analysis and the form of grammatical theory.

4:30 G. THOMAS FAIRCLAUGH (Midwestern) and RYK. VIVIAN (Kansas State): The intersection of classical rhetoric and tagmemic discourse analysis.

5:15 WOMEN'S CAUCUS, Regency Room

8:00 THIRD SESSION, Symposium organized by the Committee on Linguistics and the Public Interest, Khorassan Room C  
Chairman: Bruce Fraser

RICHARD TUCKER (McGill): Bilingual education – Attitudes towards language.

TERRY KLOKED (MIT): Training American Indians to be linguists. Third speaker and topic to be announced.

10:00 BEER PARTY, Zodiac Roof

NOTE

The Tutorial Section on Logic and Language, originally announced for this time period, has unfortunately been cancelled; it may be rescheduled for a future meeting.

Other activities scheduled for this period, if any, are posted at the Message Center in the Registration Area.
### FOURTH SESSION

**Section One, Khorassan Room A**  
Chairman: *Tsoh Lebihe*

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Charlotte WEBB (Texas, Austin)</td>
<td>Metathesis as a synchronic rule.</td>
</tr>
<tr>
<td>9:30</td>
<td>Arthur L. PACAS (Syracuse)</td>
<td>Iteration versus infinite schemata in phonology.</td>
</tr>
<tr>
<td>10:00</td>
<td>John J. OHALA (California, Berkeley)</td>
<td>How to represent natural sound patterns.</td>
</tr>
<tr>
<td>10:30</td>
<td><strong>BREAK</strong></td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Tho Vennemann (UCLA)</td>
<td>Natural generative phonology.</td>
</tr>
<tr>
<td>11:30</td>
<td>Matthew CHEN (California, San Diego)</td>
<td>On the formal expression of natural rules in phonology.</td>
</tr>
<tr>
<td>12:00</td>
<td>Larry NESSLY (Michigan)</td>
<td>Simplicity and explanatory adequacy in Southern Paiute.</td>
</tr>
</tbody>
</table>

**Section Two, Chase Club**  
Chairman: *Paul Friedric*

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Charles R. STRATTON (Idaho)</td>
<td>The pathological case.</td>
</tr>
<tr>
<td></td>
<td>Bruce Fraser (Language Research Foundation and Harvard)</td>
<td>How to get things done.</td>
</tr>
<tr>
<td></td>
<td><strong>BREAK</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Choon-Kyu OH (Hawaii)</td>
<td>Presupposition and the applicability of rules.</td>
</tr>
<tr>
<td></td>
<td>David Dowty (Texas, Austin)</td>
<td>Logical models for the interpretation of atomic predicates in generative semantics.</td>
</tr>
</tbody>
</table>

**12:45 SPECIAL INTEREST GROUPS LUNCHEON,** Starlight Roof

### FIFTH SESSION

**Section One, Khorassan Room A**  
Chairman: *Carleton T. Hodge*

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:30</td>
<td>Alan BELL (Colorado)</td>
<td>Against the distributional syllable.</td>
</tr>
<tr>
<td>3:00</td>
<td>Paul A. STARKE (Indiana)</td>
<td>On characterizing contrast.</td>
</tr>
<tr>
<td>3:30</td>
<td><strong>BREAK</strong></td>
<td></td>
</tr>
<tr>
<td>4:00</td>
<td>Frank NEMY (Massachusetts, Amherst)</td>
<td>Pitch-accent in Shona and other Bantu languages.</td>
</tr>
<tr>
<td>4:30</td>
<td>R.M.R. and Beatrice L. HALL (Queens, CUNY and SUNY, Stony Brook)</td>
<td>Vowel length in Yiddish.</td>
</tr>
<tr>
<td>5:00</td>
<td>Masayoshi SHIBATANI (California, Berkeley)</td>
<td>The phonological representations of English inflectional endings.</td>
</tr>
<tr>
<td>5:30</td>
<td>Valdis J. ZEPS (Wisconsin, Madison) and Morris Halle (MIT)</td>
<td>A sketch of the accentual system of Lithuanian.</td>
</tr>
</tbody>
</table>

**Section Two, Chase Club**  
Chairman: *Luigi Romeo*

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eugene GREEN (Boston)</td>
<td>Structure and process in proverb interpretation.</td>
</tr>
<tr>
<td></td>
<td><strong>BREAK</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Earl M. Herrick (Western Michigan)</td>
<td>An algorithm for transcription of utterances.</td>
</tr>
<tr>
<td></td>
<td>Stanley F. Wanat (International Reading Association)</td>
<td>Word class and marked vs. unmarked features in comprehension.</td>
</tr>
</tbody>
</table>

**8:00 SIXTH SESSION,** Business Meeting, Chase Club  
Chairman: *Eric P. Hamp*

**9:30 PAY-BAR COCKTAIL PARTY,** Zodiac Roof
### SEVENTH SESSION

<table>
<thead>
<tr>
<th>Time</th>
<th>Section One, Khorassan Room A</th>
<th>Section Two, Chase Club</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>ROCKY V. MIRANDA (Minnesota): How do rules get added in the middle of grammars?</td>
<td>MARTA LUJAN GOUGH (Texas, Austin): Direct object nouns and the preposition &quot;a&quot; in Spanish.</td>
</tr>
<tr>
<td>10:00</td>
<td>LYNN KYRIOTAKI (Temple): &quot;You know what?&quot; A discussion of deletions in questions.</td>
<td>BREAK</td>
</tr>
<tr>
<td>10:30</td>
<td>BREAK</td>
<td>ANN BORKIN (Michigan): Coreference and beheaded NP's.</td>
</tr>
<tr>
<td>12:00</td>
<td>JOHN A. REA (Kentucky): Tra la perduta gente: French /u/ revisited.</td>
<td>CHARLES M. JENKINS (Southwest Regional Laboratory): Cat-killing: On &quot;by&quot;-phrases in passive sentences.</td>
</tr>
</tbody>
</table>

**12:45 PRESIDENTIAL BUFFET LUNCHEON, Starlight Roof**

After the luncheon, Eric P. Hamp, University of Chicago, will present the Presidential Address: "Reconstruction, Inheritance, Diffusion and Change"

### EIGHTH SESSION

<table>
<thead>
<tr>
<th>Time</th>
<th>Section One, Khorassan Room A</th>
<th>Section Two, Chase Club</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:30</td>
<td>GERALD A. SANDERS (Minnesota): Some evidence for the hypothesis of simplex-feature representation.</td>
<td>JAMES C. WOODWARD (Gallaudet): Implications for sociolinguistic research among the deaf.</td>
</tr>
<tr>
<td>4:00</td>
<td>LYLE CAMPBELL (Missouri): Phonological features: Problems and proposals.</td>
<td>BREAK</td>
</tr>
<tr>
<td>4:30</td>
<td>DANIEL A. DINKSEN (Texas, Austin): Constraints on derivational history in phonology.</td>
<td>BARBARA ROBSON (Wisconsin, Madison): Community vs. individual competence: English /h/ in Jamaican creole.</td>
</tr>
<tr>
<td>5:00</td>
<td>JAMES K. HOARD (British Columbia) and CLARENCE SLOAT (Oregon): The integration of markedness into phonology.</td>
<td>THOMAS L. MARKEY (Harvard): Graduality, generality and simplification in dialectology.</td>
</tr>
</tbody>
</table>
The data upon which many important recent hypotheses concerning first-language acquisition are based have been drawn predominantly from the utterances of English-speaking children. This paper constitutes a preliminary report on a project which is part of the contemporary trend to broaden as well as refine our understanding of language acquisition by adding data and insights deriving from the study of other languages, in the present case, from Greek.

Observations were made by the authors on a variety of child-language phenomena in Greece during the summer of 1971. The subjects were children aged 22 months to 10 years from monolingual Greek-speaking families living in Attica, mainly Athens.

We shall first offer some tentative remarks on the impact of certain global features of Greek phonology on possible developmental strategies to be attested in the data. By contrast, we report in some detail on the phonology and syntax of individual subjects, comparing our results with those of researchers working on other languages such as English and Russian.

In phonology, we comment especially on contrasts between spontaneous and imitated utterances, as well as the problem of the non-homologous production of auditorily identical segments. In syntax, likewise, we comment especially on the expression of gender, case and concord, and the problem of Greek word-order.
The general findings described are consistent with data from the remaining children as well.

Method. For all transcripts, each non-vowel* was scored as follows:

1. no entry --- indicates unit neither used nor substituted for,
2. minus (-) --- variants of the unit are found,
3. plus minus (+-) --- unit correctly used and in variant form,
4. plus only (+) --- unit never in variant form, may substitute for other units.

Roman Jakobson has suggested that marked phonemes will be later acquisitions than unmarked. The results which appear in Table B indicate that this is the case in Quechua. Confirmation of the hypothesis is an especially strong one, since fully one-half of the Quechua units are marked. Moreover, it is possible to order two sets of marked units. Those marked [+ checked] are uniformly at + status later than the corresponding stop marked [+ tense]. The ordering is characteristic of all transcriptions examined to date.

A second feature of the development of stops in sample A may be idiosyncratic. There is a suggestion that the order of development of the simple stops which Jakobson outlined in 1943 may be recapitulated for the aspirated and glottalized series: /p'v/ \(\{/t'/, /k'/\}\), and /p'/ \(\{/t', /k'\}\). It is interesting to note that the doubly marked units (/q'/, /q'/, /ł'/, and /ł'/) are less advanced in the developmental sequence (no entry, - , + , + ) at any time t than are the singly marked units.

To evaluate the minimum feature difference rule for contrast, we used a conventional distinctive feature matrix and analyzed the variants produced by all four children. (Table C)

<table>
<thead>
<tr>
<th>Number of feature differences</th>
<th>1</th>
<th>2</th>
<th>3*</th>
<th>Tot.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent variants</td>
<td>18</td>
<td>3</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>All variants</td>
<td>23</td>
<td>9</td>
<td>5</td>
<td>37</td>
</tr>
</tbody>
</table>

All four common variants with more than one feature difference are velars: /q'/, /ł'/, /ł'/, /ł'/, /ł'/, and /ł'/. Except in the case of the post-velar, the simple stop is usually at + status when variants are produced for the marked stop and the simple stop is the principle variant (one feature difference). Among the set of six velars and post-velars only /ł'/ and /ł'/ reach + status in the period examined. Advanced position in the developmental sequence predicts all frequent variants, while the minimum feature difference rule specifies several which do not occur (/q'/, /ł'/, /ł'/, /ł'/, /ł'/, etc.) and does not predict the four supernumerary variants above.

An additional feature of Table C may have implications for a theory of acquisition. The small number of units entered in the upper right half of the matrix tells us that nonmutuality of substitution is the rule. This plus the fact that aspirated units develop earlier than glottalized (while the latter would appear to be perceptually more salient), and the occurrence of the /ł'/ variant [Kalpa 2:1, 4:2]---not a Quechua unit, suggest that development cannot be explained exclusively in terms of detection of features in the acoustic array.

*The three Quechua vowels were never substituted for.
### Table A

**A Distinctive Feature Matrix of Quechua**

|       | p | p' | b* | t | t' | d* | z | ñ | k | k' | g* | q | q' | x | h | s | ñ | r | l | ñ | y | w | m | n | ñ̃ |
|-------|---|----|----|---|----|----|---|---|---|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vocalic |   |    |    |   |    |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Consonantal | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Grave | + | + | - | - | - | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Diffuse | + | + | + | + | + | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Compact | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Nasal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Continuant | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sharp | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Checked | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Tense (Voice) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

*p" t" k" q" correspond to p h etc.*

*p' t' k' q' correspond to p' h etc.*

**Starred Items (all voiced stops) appear only in Spanish loans**

**Source:** Abromoski (1970)
TABLE C

FEATURE CONTRASTS OF VARIANTS

Quechua Variants:

<table>
<thead>
<tr>
<th>p&quot;</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>t&quot;</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>k&quot;</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>k'</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>ċ&quot;</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>q&quot;</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>q'</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>x&quot;</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>h&quot;</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>s&quot;</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>š&quot;</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>ḍ&quot;</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>ž&quot;</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Ḳ&quot;</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>乏</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>乏</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Numbers indicate number of feature differences between X and variant. Heavy circle=most frequent variant. Light circle=less frequent variants.

Carolyn Kessler, St. Mary-of-the-Woods College

CONTRASTS IN THE ACQUISITION OF SYNTAX IN BILINGUAL CHILDREN

Based on the theory that similarities between languages are traceable to deep structure identities and that differences derive from language-specific realization rules, an investigation is made of the acquisition of certain syntactic structures in bilingual children. The purpose of this paper is to present evidence that structures common to two languages are acquired at approximately the same rate and in the same sequence by bilingual children. For structures manifesting differences between the two languages, the linguistically more complex structure is the later acquisition.

Twelve bilingual children, age 6 to 8, living in the Italo-American community of South Philadelphia were selected for this study. The investigator examined linguistic competence in both Italian and English through a battery of comprehension tests investigating a wide range of surface structures. A statistical analysis provides the basis for interpreting general patterns of acquisitions; a case grammar model of transformational theory (Fillmore 1968, 1971) is the framework for analyzing the specific sequencing of structural acquisitions.

An example of the type of surface structures investigated is the direct/indirect object relationship illustrated in the pair: the girl shows the cat to the dog/the girl shows the dog to the cat. Underlying case relations are indicated in diagram 1.

(1)

\[
\text{SENT} \\
\text{Verb} \rightarrow \text{Agentic} \rightarrow \text{Objective} \rightarrow \text{Goal}
\]

Realization rules operative for both languages order the cases and provide for preposition-insertion. The final surface structure realized by Italian and English is given in 2.

(2)

\[
\text{SENT} \\
\text{NP} \rightarrow \text{O} \rightarrow \text{G} \\
\text{NP} \rightarrow \text{Prep} \rightarrow \text{NP}
\]

the girl shows la ragazza fa vedere
the ball to la palla a alla
the mother the mother
la mamma
An English-specific variant of this structure is found in the pair: the girl shows the dog the cat/the girl shows the cat the dog, a result of the hierarchy of cases: V-D-O = V-O-D. Experimental evidence indicates that realization rules common to two languages are incorporated into the child's grammar before language-specific rules.

Very few empirical studies have investigated the simultaneous acquisition of two languages in children. The investigator knows of none that have analyzed late acquisitions in terms of contemporary linguistic theory. Results of this investigation have implications for a theory of language and language universals and give insights into the nature of bilingualism.

Paula A. Treichler, Urbana, Illinois
FORM AND FUNCTION IN THE TENSE USAGE OF RETARDED CHILDREN

My paper is based on an experimental study of tense usage in retarded children which was primarily designed to establish comprehension and production of past, present progressive, and future tense forms. Though my strategies to modify deviant verbal behavior were successful, the paper is more concerned with the particular characteristics of tense usage in these children and the general study of language deviance. My own views are that formal deviance does not define deviant language, that form must be related to function in the social context where verbal interactions occur, and that when we commit ourselves seriously to this approach, any meaningful criterion for "deviance" dissolves. What emerges most clearly from detailed study is not that "deviant language" is exotically different from normal language but that it is so much the same.

The findings which suggest this position are based on data from classroom observations and from individual teaching sessions; the children ranged in age from 6-16, in IQ from 41 to 69, and were officially described as having moderate to severe language disorders.

Findings are discussed in relation to my own conclusions, to studies of normal language acquisition and to reports of deviant language in retarded children (which are few). The following description briefly illustrates the nature of my observations and conclusions: (1) A child's formal output had little relation to his effectiveness in social communication (thus the fairly sophisticated response "The ceilings are painted" was inappropriate in the context of his teacher's question "Who else did you see?" while another child's response "Haircut" to "What did you do this weekend?" was an abbreviated but readily acceptable instance of functional tense usage. (2) Verbal performance of these children—in the same class and with roughly similar IQs—varied enormously in form, function, production, and comprehension; performance often varied in relation to features of the immediate setting, including verbal context. One child, for example, responded as follows to three similar (but not identical) questions from her teacher:
What did you do this weekend?  Stayed home
What did you do at home?  See Mommy
What else did you do?  Yellow dress

(3) The example also illustrates that the occurrence of a formally appropriate tense marker (-ed) does not guarantee its existence as an independently functional unit; similarly, functional tense marking may occur in the absence of standard forms (one child consistently produced "just now," "already," and "then" with the base verb instead of the respective standard markers -ing, -ed, and going to). (4) Continuous records of verbal interactions during teaching provided detailed information about the verbal environment in which given responses were acquired; though learning a functionally appropriate past tense marker in a 10-minute session is not comparable to a natural setting, it permits tracing the entering response ("eat bread") through various permutations ("did ate" — "did (pause) ate" — "ate-ing" — "ate bread"). (5) Attempts to modify previous responses typically caused fragmentation and recombination; most children entered teaching with the unmarked verb ("eat bread") as a well-established functional form; in the process of acquiring eating, going to eat, and ate as differentiated units, their responses included "going eating," "ate-ing," "did ate," "going bread," "to going eat," and so on. Though such responses were formally deviant, they were closer behaviorally to appropriate tense usage than the earlier invariant form.
PIC + Tell me what he's going to do
going to eat carrots
26.
PIC + Tell me what he's doing
eating carrots
27.
PIC + Tell me what he did
eat --
ate carrots
ate carrots
28.

C. Della, Session 11
PIC: EATING SALAD/GOING TO EAT TURKEY
Tell me what he's doing
eating lettuce
eating turkey
2. Tell me what he's going to do
3. Tell me what he's going to do
Resists -- going to eat lettuce
turkey
4. PROMPT: going--
5. PROMPT: turkey
6. Tell me what he's doing
going to eat --
7. Tell me what he's eating
turkey
8. Tell me what he's going
going to eat --
9. Tell me what he's going
going to eat lettuce
10. Tell me what he's doing
11. Tell me what he's eating
go -- eating watermelon
12. Tell me what he's going
to eat
go to eat cake

D. Della, ate responses Sessions 12 and 14
1. Tell me what he ate [BREAD]
et bread
2. Tell me what he ate [SOUP]
et soup
3. Tell me what he ate [SALAD]
ete lettuce
4. Tell me what he did [ATE BREAD]
did --
5. PROMPT: silent [my]
6. Tell me what he did
ete lettuce
7. Tell me what he did [ATE SOUP]
ete lettuce
8. PROMPT: ate
9. Tell me what he did [ATE SALAD]
ete lettuce
10. PROMPT: silent [my]
11. Tell me what he did
ete lettuce
12. Tell me what he did [ATE TURKEY]
did --
13. PROMPT: silent [my]
14. Tell me what he did
ete lettuce
15. Tell me what he's doing [EATING WATERMELON] going -- eat -- watermelon
16. Tell me what he's doing
17. Tell me what he did [ATE WATERMELON]
ete watermelon
ate lettuce
18. Tell me what he did
ete cake
19. Tell me what he did [ATE CAKE]
did ate bread
did -- ate soup
did -- STOPES, SHAKES HEAD -- ate lettuce
20. Tell me what he did [ATE BREAD]
ete cake
21. Tell me what he did [ATE SOUP]
ete cake
22. Tell me what he did [ATE SALAD]
ete cake
23. Tell me what he did [ATE TURKEY]
ete lettuce
24. Tell me what he did [ATE WATERMELON]
ete cake
25. Tell me what he's doing [EATING CAKE]
ete cake
26. Tell me what he did [ATE CAKE]
ete cake

E. Ben, Session 5
1. MO: eating a banana
2. he's eating a banana
3. he's eating a banana
4. he's eating a banana
5. MO + PIC: he's eating a banana
6. MO + PIC: he's eating a banana
7. MO: a banana
8. a banana
9. a banana
10. a banana
11. a banana
12. a banana
13. a banana
14. he's eating a banana
15. MO + PIC: he's eating a banana
16. MO + PIC: he's eating a banana
17. PIC + Tell me what he's doing
eating a banana

F. Ben, Session 5
1. SNACK CANDY + Tell me what you're going to eat
eating a candy
2. Tell me what you're going to do
eating a candy
3. GIVES CANDY + Tell me what you're doing
I'm eating a candy
4. PROMPT: I'm--
5. Tell me what you did
6. MO: I ate a candy
7. Tell me what you did
8. Tell me what you ate
9. MO: I ate a candy
10. RETURN TO PROGRAM: MO: a carrot
11. MO: going to eat a carrot
12. MO: going to eat a carrot
eating a carrot
13. MO: he's going to eat a carrot
eating a carrot
14. Tell me what you did
eating a carrot
15. MO: I ate a candy
16. MO: I ate a candy
17. Tell me what you did
18. I ate a candy
19. I ate a candy

G. Ben, Session 5
1. MO: he's going to eat a banana
2. PIC + Tell me what he's going to do
I'm going to eat a banana

H. Curt, Session 4
1. MO: going to sleep
goes to sleep
2. PIC + Tell me what she's going to do
goes to going -- to sleep
go to going sleep
go to going sleep
go to going sleep
3. MO: going to sleep
4. MO: going to sleep

* ellipses dots indicate omission of one or more interactions
I. Car, Session 5
1. NO: going to sit
2. NO + FIX: going to sit
3. FIX + Tell me what she's going to do
4. NO: going to sit
5. going to sit
6. to sit
7. going to sit

J. Car, Session 6
1. Fix: going to eat a banana
2. NO: going to eat a banana
3. NO: banana
4. NO: he is going to eat
5. Tell me what he's going to do
6. FIX: GIRL GOING TO SIT
   Tell me what she's going to do

K. Edward, Session 2
1. Point to the boy who ate turkey + FIX

L. Arthur, Session 1
1. E IS ARRANGING PICTURES
2. IGNORES
3. Yes, you'll be here
4. DATE IS JULY 13 This is July
5. Yes, the first week.
6. August.
7. SMILES. It'll all work out.
8. FIX: CARROTS + What's this?

M. Arthur, Session 2
1. FIX: ATE TURKEY/GOING TO EAT WATERMELON
   Tell me what he's going to eat

N. Foster, Session 12
1. NO: going to eat carrots
2. FIX: RABBIT ATE CARROTS + Tell me what he ate
3. Tell me what you did
4. NO: going to eat
5. FIX: NO RESPONSE
6. PROMPT: going--

... going to sit
... going to sit
... going going going sit
... going sit
... to going sit
... to sit
... going to sit

I know--going to eat manas
yeah-- going to manas
banana

he is going to eat
he is going to eat
he--she is going to sit

STANDS, PULLS UP SHIRT, Look at my bruises

Could you take me down to the bus?
I be here tomorrow?
Going to go eat gonna park next week --
August
I know. Be here in August?
July?
Just first numbers? Not the second night?
Yeah, I know.
Carrots. I like speech.

a bone--he eat watermelon he go done
gs eat chicken an' he eat watermelon when
he's done

goin' carrots
goin to eat candy
ate candy

Benjamin K. T'sou, University of California, San Diego
REDUPLICATION AND REDUCTION IN LOLOISH QUESTION DERIVATION

It is generally thought that there are three principle processes by
which natural languages derive simple Yes-or-No questions (YNQ's) from
their corresponding declarative sentences:

(1) By a change of sentence intonation
(2) By the inversion of subject and verb (or the first
element of VP)
(3) By the addition of a fixed morpheme.

(1) is generally thought to be universal to all natural languages and
there are languages that employ (1) exclusively for YNQ's. (2) is the
usual mode of interrogation in the Indo-European languages, while (3) is
common to languages in Asia. However, there are members of the Loloish
branch of the Tibeto-Burman language family which employ a unique process.
Data from Sani and Nasu, which are SOV languages, have shown that in the
more traditional framework Loloish languages derive YNQ's from the cor-
responding declarative sentence by the reduplication of the last (verbal)
element in the sentence.

In the current literature question formation in general begins with
the coordination of two disjuncts: a positive sentence and its negated
counterpart. Then by reduction processes, redundant elements of the
second disjunct are deleted so as to arrive at the simpler surface forms
of YNQ's. It is generally assumed that such reduction processes follow
Conjunction Reduction, which includes Gapping phenomenon. However, an
examination of Loloish questions and simple YNQ's in other languages
shows that Conjunction Reduction as usually formulated cannot account
for Loloish questions or questions in other languages. This paper
examines these reduction processes used in simple YNQ derivations and
proposes a different process, Redundancy Reduction, which will account
for not only YNQ derivation in general but will also account for the
unique Loloish case. Other syntactic evidence will be brought forward
to justify the coexistence of both Redundancy Reduction and Conjunction
Reduction in natural language.

[22]
Valley Zapotec contains two future aspects. The future aspect that refers to events that will definitely happen (the determined future) cannot occur with certain negative, question and relative clause structures. Of particular interest for linguistic theory is the parallelism found between questions and relative clauses. Both WH questions and relative clauses are unacceptable if the S that immediately dominates the question word or the relative clause marker also immediately dominates a verb in the determined future. This condition holds regardless of where the WH marker or relative clause marker was originally introduced in deep structure. But note that yes/no questions marked by either an initial particle or by intonation are acceptable with this aspect. Present transformational theory allows for at least two types of explanations for this phenomenon. A specific restriction in the S.D. of the movement rules involved or a general constraint on the movement of constituents in sentences containing the determined future aspect. However the absence of this movement restriction on other types of structures containing this aspect strongly argues for the former explanation. Moreover, the fact that there are identical restrictions on the movement of main constituents in both WH questions and relative clauses suggests that the two markers involved share similar features in their deep structure form, though (with one possible exception) there is no overlap in morphological shape. Taken together, these facts are evidence that the same rule is responsible for both WH question movement and the movement of the relativized constituent. In view of the current division of opinion about the status of such a rule for English, these conclusions from Zapotec have implications for general linguistic theory.

When we examine the morphological structure of languages which consistently have objects after verbs in simple declarative sentences, we find that many such languages are agglutinative. Examples are Japanese, Turkish and Quechua. The paper proposes to explain the interrelationships between OV languages and agglutinative morphology on the basis of a fundamental movement rule. By this rule syntactic elements which are modifiers are placed on the converse side of the elements O and V. For example, in consistent VO languages, relative constructions, descriptive, adjectival and possessives follow O; in OV languages they precede O. If Modalities are viewed as verbal modifiers of the Proposition, in accordance with the rule cited above they should be placed after V and before # in OV languages. This placement leads to agglutinative morphology.

As an example we may cite Japanese verbal constructions like okirareta ka 'Is he not able to get up?' The order of the Modality markers is: (V) Potential Neg O. Placement of the markers is made to the right of the verb, as in VO languages it is made to the left. Examples may be given for other OV languages.

Assumption of the rule has various implications. It supports close relationship between syntax and morphology. It provides further means for distinguishing between Modality markers and markers for congruence—which are not governed by the rule. It supports recent suggestions that Tense must also be classified separately, possibly from adverbal elements. It leads to an understanding of the morphological structure of VO languages, particularly the VSO subtype; for if the rule is strictly applied, Modality markers would be preposed to verbs only in VSO languages, as indeed they are. It provides further insights into the developments of individual languages, such as the shift from an OV structure in early PIE to a VO in many of the dialects.

Finally, the paper provides further evidence on the usefulness of recent typological and syntactic theory for providing insights into the structure of languages and their changes.
1. Placement rules:

OV languages

1.1 Nominal modifiers, e.g. relative constructions:

\#_OV\#

\#_VO\#

1.2 Sentence modifiers, e.g. T-markers or Mod-markers:

\#...V Q#

\#Q...V...

e.g. Japanese yomu (he) reads

yomu ka does (he) read?

\#...V Neg Q#

\#Q Neg...V...

Japanese yoma-nai ka does (he) not read?

\#...V Pot Neg (Q)#

Japanese yoma-re-nai (he) can not read

Japanese yoma-re-nai ka can (he) not read?

Turkish gir-me-di-niz mi did you not enter?

5 4 3 2 1

1 = Q 2 = 'you' 3 = Past 4 = Neg 5 = enter


Munda: OV

Rel N, AN, GN

Agglutinative

Eastern: VO

NA, NG

Isolating

Robert Underhill, Harvard University

REMARKS ON POSSESSIVES

It is remarkable that in many languages there is a formal similarity between ordinary possessive constructions ("John's hat") and genitive nominal constructions ("John's coming"). We attempt to account for this similarity by arguing that the transformation which creates nominalizations creates a derived structure identical with that of ordinary possessives. Then the "possession-marking" transformation introduces the formal markers for possessive constructions into all such structures.

The argument proceeds as follows: (1) In an ordinary possessive construction, the possessor is an NP, since it can be expanded to include another possessor ("John's father's hat"), but the possessed is not an NP since it may not contain another possessor ("John's Bill's hat").

(2) Borrowing the formalism suggested by Chomsky, we may represent the structure of a possessive construction as \( \mathbf{N} \), where \( \mathbf{N} \) is the traditional NP. (3) A nominalization has the structure \( \mathbf{N} \); the nominalization transformation changes \( \mathbf{N} \) to \( \mathbf{N} \), resulting in the deletion of \( S \). (4) Possession-marking then operates on structures of the form \( \mathbf{N} \) to insert the appropriate markers.

The analysis is primarily worked out with respect to Turkish, but because several aspects of the analysis are presented as suggestions for a universal theory of possessives, there is attention to English, Thai, and other languages.
A number of phenomena, both across languages and within the grammar of a single language, suggest that the NP's in a sentence must be ordered so that:

1. across clauses, higher NP's have primacy over lower NP's, and
2. within a clause, one NP has primacy over another if the first precedes the second in the temporal order.

Some of the facts which suggest the correctness of (2) are the following:

1. The existence in the grammar of any language of Equi NP Deletion with object controller presupposes the existence of Equi NP Deletion with subject controller, but not conversely.
2. Similarly, Subject Raising into (derived) object position presupposes the possibility of Subject Raising into (derived) subject position, but not conversely.
3. Similarly, if some language agrees verbs with objects, then also with subjects, but not conversely.
4. Similarly, if reflexives in a language can refer to non-subject NP's, then they can refer to subject NP's, but not conversely.
5. If a language allows non-subjects to be relativized, it will also allow subjects to be, but not conversely.
6. Also, there are some rules which are unrestricted in subject position but which must have conditions imposed upon them in object position. The reverse appears not to be the case.

One fact which suggests the correctness of (1) is the fact that if a language allows any elements of lower clauses to be moved by a transformation, then it will also allow elements of higher clauses to be. Again, the converse does not obtain.

The implication of the existence of such a hierarchy among the NP's of a sentence for the theory of syntactic change will be discussed.

The purpose of this paper is to propose within the framework of transformational grammar a general principle which will account for some essential aspects of adverbial placement in Mandarin Chinese.

The proposed principle is a global constraint to the effect that if predicate A commands complement predicate B in underlying structure, A must precede B in surface structure.

This principle explains the fact that in Chinese, one class of adverbs can occur between the subject and the main verb and can be proposed to sentence initial position, while the other class of adverbs can only occur after the main verb and are not subject to the preposing. They can be illustrated by (1) and (2) respectively.

1. a. ta suotian laile (he yesterday came)  
   b. suotian ta laile  
   c. *ta laile suotian
2. a. ta laide heshi *(timely)  
   b. *ta heshi laile  
   c. *heshi ta laile

A preverbal adverb is always understood as having the main verb in its scope, while a post-verbal adverb is never understood in this way. It will be shown that this follows from the proposed constraint and the independently motivated assumption that the semantic scope relation is universally characterized by the asymmetrical command relation in underlying structure.

The present treatment can also explain the fact that in Chinese, if adverb X is semantically in the scope of adverb Y, then X is always ordered after Y (as in (3)), and whenever both X-Y and Y-X are possible for a pair of adverbs, it is the case either that there is a contrast of meaning related to differences in scope (as in (4)) or else that there is no sentence in which either of these two adverbs can be understood to be in the scope of the other (as in (5)).
(3) a. wo qunian youshihou kanjian ta
(I last-year sometimes saw him)

b. wo youshihou qunian kanjian ta
(I last year sometimes saw him)

(4) a. wo zuotian ku yi dale ta
(I yesterday intentionally hit him)

b. wo ku yi zuotian dale ta

(5) a. ta sai chufang li yung dao xi qie yu
(he at kitchen in with knife cut fish)

b. ta yung dao xi sai chufen li qie yu

Furthermore, the proposed treatment can explain why the Chinese
correspondents of English sentences like "this thing is possible" (zheng
jian shi zhi ke ne ng de) are grammatical, the Chinese correspondents
of sentences like "that John is sick is possible" (John bing li shi
ke ne ng de) are always ungrammatical, the only possible positions for
higher predicates like "keneng" (possible) being before their lower
predicates as in sentences "keneng John bing li" and "John keneng bing li".
This contrast and a number of other systematic differences between Chinese
and English will thus be explained in a very general way by the assumption
that Chinese observes the proposed constraint, while English does not.
It will also be shown that the same precedence constraint can be
used to account for the placement of auxiliaries, negatives and quantifiers which can also be appropriately derived from underlying predicates
in Chinese.

Problems of scope have usually been considered as belonging to the
realm of logic and of more interest to philosophers than to linguists.
This is probably why some Scholastic views on scope of purely grammatical
or linguistic interest have been dismissed as "syntactic" by logicians
(e.g. Bocheński), and they have, at the same time, been ignored in ac-
counts of the development of linguistics.

This study explores the views on the scope of modalities (sense de re
and sense de dicto) of such writers as Paul of Venice (Logica Magna),
among others. These views are surprisingly similar to those held by
generative grammarians today. For instance, Paul of Venice considers
that the scope of a modality such as possible depends on its relative
position in the chain: when it precedes the proposition, it ranges over
the whole sentence (sense de dicto); when it follows the verb, it can
only range over terms (sense de re); and when it follows the proposition,
its sense can be both de dicto and de re.

It is easy to translate views of this type into current terms: some
Schoolmen felt that modalities (together with such syncategorematic words
as begin) are assigned scope through rules (e.g. derivational constraints,
surface structure interpretation rules) which are sensitive to the late
or derived configuration of a string. The scope of modalities depends on
their position in shallow or surface structure.
The English school of phoneticians, understood by Firth and Abercrombie to consist of three centuries of native work, also finds American members. Known mainly for their other work, Peter Duponceau and John Pickering produced phonetic monographs that reflect an awareness of British predecessors.

Duponceau's concern in "English Phonology; or, An Essay towards an Analysis and Description of the component sounds of the English Language" was to reject discussions of the "powers" of "letters" for what he thought would be a direct analysis of the sounds themselves. Though his essay had little subsequent effect, Duponceau did influence Pickering to write "On the adoption of a uniform Orthography for the Indian Languages of North America," a work which again shows an awareness of previous proposals for the phonetic application of roman alphabets. Furthermore, Pickering was successful in securing European attention.

What emerges from the attempt to link Duponceau and Pickering to "the English school of phonetics" is the discovery of still further examples of, now forgotten, early Anglo-American mutual influence.

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E.E. CUMMINGS' POETIC DISLOCATIONS OF ADJECTIVALS AND ADVERBIALS

Cummings tends to blur distinctions between adjectival and adverbial. For purposes of dislocation and deviancy, generally, he treats them as one larger group of modifiers that undergo analogous impermissible adjustments. For both adjectivals and adverbials Cummings disregards serial ordering restrictions; his impermissible preposing of adverbials parallels his violations of ADJ-SHIFT application.

It is significant that many of the dislocations involve manner adverbials, which as a sub-class most closely relate to adjectivals in form and derivation (it has been argued that many manner adverbials are derived from corresponding adjectival complements), and locative adverbials, which derive from a 'be-predication' similar to relative clause formation of adjectivals. Cummings uses adverbials (frequently 'manner') in unmistakably adjectival positions, and we find instances in his poetry of adverbials that have deviantly undergone ADJ-SHIFT after WH=be deletion.

As with his deviation of S-V-O ordering and English word formation, Cummings' deviations of adjectival and adverbial modification indicate that he closely follows options already existing in English syntax. For both adjectivals and adverbials Cummings ignores sub-class restrictions—selecting from a class of relatively limited movement and permitting positions optional for other "freer" sub-classes. In the case of ADJ-SHIFT, Cummings' wide range of deviations are suggested by inherent syntactic restrictions—he ignores restrictions and shifts certain modified adjectivals (and may fail to adjust adjectival/adverbial order after the shift) and verbs that dominate a complement; shifts gerunds and past participles that are restricted, thus making regular verbs exceptional; shifts adverbial modifiers after WH=be deletion, but fails to shift unmodified descriptive adjectivals. In all instances, Cummings' syntactic deviations can be 'explained' by reference to analogous processes in standard English, Old English, or Indo-European. His violations nicely illustrate the manner in which a poet creatively adapts the limits of his syntax.
HANDOUT

E. E. Cummings' Poetic Dislocations of Adjectivals and Adverbials

Adjectival Violations

1. a) ...this like a leastest / poem a / "mouse" (p. 206)*

b) a like a / grey / rock wanderin / g through / pasture / wom / an creature... (p. 458)

c) ...came a huger than fear a // white with madness wind... (p. 310)

2. a) m(o)w / the // how / dis(appeared cleverly)world! / is Slapped:with:lightning (p. 250)

b) a tear within his stern blue eye, upon his firm white lips a smile, (p. 195)

c) this(once flinger / of lariats lean exposer of horned suddenly crashing things)man spits (p. 181)

3. a) ...a // white with madness wind... (p. 310)

b) a few deleted of texture or meaning monuments and dolls (p. 186)

b) am i content should any by me carven thing provoke your gesture possibly... (p. 209)

c) ...and strewed the black air with writhing alive skies (p. 310)

de) ...these emerging now / hills invent the air (p. 257)

e) ...I note how / fatally toward // twilight the a little / tilted streets spill lazily / multitudes... (p. 248)

4. a) morsel miraculous and meaningless (p. 326)

b) me, whose heart-wholeness overmuch Expect of your hair pale, (p. 10)

5. a) ...lean exposer of / horned suddenly crashing things... (p. 181)

b) ...the gay / great happening illimitably earth (p. 464)

c) a blue woman with sticking out breasts... (p. 125)

d) just by the dirty collar of his / jacket were two glued uncarefully ears (p. 256)

e) ...any--lifted from the no of all nothing--human merely being (p. 464)

f) (as that named Fred /someBody / hippopotamus...) (p. 180)

6. a) and a blue true dream of sky... (p. 464)

b) ...Two pale slippery small eyes/ balanced upon... (p. 293)

c) if i have made,my lady,intricate imperfect various things chiefly... (p. 219)

d) i thank You God for most this amazing/ day.... (p. 466)

e) lovetree!least thr/ rose alive must... (#90, 95 Poems, 1950)

f) obsolete almost that phenomenon (p. 434)
Adverbial violations

7. a) ...Both very young noisily who kiss throw silently things (p. 225)

b) tilted streets spill laziest multitudes out of final (p. 248)

c) whose stilling lips murder suddenly me, (p. 117)

d) ...placing carefully there a strange thing and a known thing here)... (p. 100)

e) [you] touch (now) with a suddenly unsaid// gesture lightly my eyes? (p. 217)

8. a) ...When we grimly go to bed (p. 114)

b) alone who slightly always are beyond the reach of death (p. 257)

c) see/ yes)/ It/ here/ comes (p. 201)

d) e-e-t-noWheregoing&love&ye (p. 268)

e) the snow carefully everywhere descending; (p. 263)

9. a) whose bodies strong with love through meadows hugely move. (p. 10)

b) My strong fingers beneath the snow// into strenuous birds shall go (p. 13)

10. a) and on Death's blade lie many a flower curled, (p. 154)

b) in your most frail gesture are things which enclose me, (p. 263)

c) across the harvest whitely peer empty of surprise/ death's faultless eyes (p. 10)

d) by the high minded pure young girl/ much kissed,by loving relatives well fed,and fully photographed the son of man goes forth to war (p. 196)

e) somewhere I have never travelled,gladly beyond any experience,your eyes have their silence; (p. 263)

f) into the strenuous briefness/ life:/ handorgans and April/ darkness, friends/ I charge laughing. (p. 54)

11. a) Spring is like a perhaps hand (p. 100)

b) what bird has perfect fear/ (of suddenly me)like these (p. 264)

c) if we love each(ahly)/ other... (p. 262)

d) and possibly I like the thrill/ of under me you so quite new (p. 129)

e) how myself has been coarse and dull compared with you,silently who are and cling/ to my mind always (p. 216)
James C. Stalker, Michigan State University

POETIC ANALYSIS AND THE FORM OF GRAMMATICAL THEORY

This paper will show that the study of syntax in poetry leads to insights into the role of syntax in the grammar of English as well as explanations of the structure of poetry. An analysis of Dylan Thomas’ “In the White Giant’s Thigh” using current transformational theory suggests that Thomas has constructed a poem in which excessive application of ido-deletion and permutation rules renders deep structure recovery impossible, or at best subject to educated guessing. However, such a view seems simplistic. An alternate explanation is equally possible. If we assume simultaneously operating syntactic and semantic components, we can conclude that Thomas has at points within the poem bypassed or altered portions of the syntactic component and that we have a poem that is the product of the manipulation of both systems.

The clearest example of syntactic irrecoverability in “In the White Giant’s Thigh” occurs in lines 29-40.

Who once were a bloom of wayside brides in the howd house
And heard the low, woody field fowl to the coming frost.
The scurrying, furred small friars squeal, in the downs
Of day, in the thistle mists, till the white owl crossed

Their breast, the vaulting does roister, the horned bucks climb
Quick is the wood at love, where a torch of foxes dooms,
All birds and beasts of night uproar and chime.

And the mole snout blunt under his pilgrimage of domes,
Or, butter fat goosegirls, bounced in a gambo bed.
Their breasts full of honey, under their gander king
Troubled by his wings in the hissing shippen, long dead.
And gone that barley dark where their clogs danced in the spring....

Although portions of the passage are easily analyzed into deep structure representations, an analysis that unites the whole passage into a reasonable deep structure seems unlikely. Just as “Jabberwocky” fills our heads with ideas through clear syntax and obscure semantics, “In the White Giant’s Thigh” fills our heads with ideas through recognizable semantics and obscure syntax. Some of the irrecoverable portions are: what is the head NP of the first relative marker ‘who’; what syntactic relationship does “he vaulting does roister” bear to the preceding and

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* refer to E.B. Cummings, Poems 1923-1954.
following lines; what is "and the mole snout..." conjoined with?

It is possible, of course, to dismiss this portion of the poem as simply a clear example of violation of strict subcategorization rules. However, an analysis of the syntactic patterning within the complete poem reveals that Thomas is balancing syntactic manipulation with semantic manipulation so that the divergence or convergence of the two systems communicates the intent of the poem, providing further evidence that we might profitably consider the possibility of simultaneous operation of syntactic and semantic components of the grammar.

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Roy E. Vivian, Kansas State College
THE INTERSECTION OF CLASSICAL RHETORIC AND TAGMEMIC DISCOURSE ANALYSIS

Recent formulations of tagmemic discourse and paragraph analysis (Longacre, *Philippine Languages*, 1970) are useful in describing the organization of prose argument, especially when applied in conjunction with the descriptive machinery of classical rhetoric (CR). Such a dual analysis is performed on two sermons which enjoy high critical ranking for well-formedness as hortatory discourses: Bourdaloue, *Sur l'âme* and Robertson, *The Dout of Thomas*. The results show that tagmemic analysis complements CR importantly by providing more adequate formal characterizations of analogy and the rhetorical question, and by resolving a CR controversy about the status of partition as a discourse-level tagmem and its recursiveness at lower levels. Similar parallel purposive-formal analyses of other discourse types are proposed, to determine the extent to which tagmemics can augment the power of CR—or vice versa—in the description of narrative or expository discourse.
The status of synchronic metathesis is discussed by Chomsky and Halle in *The Sound Pattern of English*. They claim that "metathesis is a perfectly common phonological process." This is the justification given for their extension of the notational system to permit rules such as the metathesis rule, for their claim that the cost of such a rule is not too great, and for their statement that such mechanisms are readily available to the child as he attempts to construct the grammar of his speech community.

Diachronically metathesis is a fairly common phonological process. As a synchronic process, however, metathesis is uncommon. I shall argue that it should be considered a very costly mechanism which is probably not readily available to the child. Generally, putative synchronic rules of metathesis are found in only the most abstract phonological descriptions where the history of the language is essentially recapitulated. However, even where rules of metathesis can be motivated synchronically, as for example in Hungarian, they appear to be the result of another constraint as well, such as a syllable structure constraint.

This paper will examine in detail the only example of metathesis given in SPE, namely the Kassem problem, and show that Kassem does not have a metathesis rule. The independently motivated Kassem rule of vowel truncation proposed by Chomsky and Halle is defective as stated. When this rule is extended as it must be even within the Chomsky-Halle formulation, it accounts for the forms which are given as evidence for a metathesis rule. An added advantage of doing away with the metathesis rule is that it then becomes unnecessary to establish an underlying segment order for some forms which does not match the surface segment order.

Arthur L. Palacas, Syracuse University

*Iteration versus Infinite Schemata in Phonology*

Subscription (or, star) notation of the sort used to represent infinite schemata in phonology has two important properties: an ability to characterize arbitrary lengths of repeating sequences or segments and an ability to effect identical changes associated with each repetition.

The power of subscription can be shown to be too great, however, giving false predictions of linguistic generality. For example, they make possible the assimilation of segments "at a distance."

It is proposed here that rule plausibility can be preserved and the power of subscription appropriately constrained by the Adjacency Condition on the form of phonological rules. This principle asserts that in a plausible assimilation rule, the items of cause and effect of the change must be 'adjacent' segments, with important qualifications. In addition, it becomes necessary to adopt the principle of the Iterative Applicability of phonological rules; this will retain the contribution of Adjacency to rule plausibility while capturing the virtues of subscription notation, whose use for infinite schemata Adjacency now rules out.

Adjacency poses similar constraints on 'arbitrary string variables,' usually represented by X, Y, Z.
The current phonological literature is overflowing with evidence that the naturalness of commonly observed sound patterns and processes is not adequately accounted for when represented using the traditional distinctive feature notation even with the addition of marking conventions. Much of this difficulty can be avoided by dropping the requirement that the natural representation of natural rules be done using the same format and features supposedly appropriate for representing psychologically real phonological rules. (Granted, due to their long experience with sound systems, linguists intuitively know what natural sound processes are, but it does not follow that all speakers share these intuitions or that natural rules will have a simpler representation in their mental grammar.)

In order to represent or model a given sound pattern in a way such that its expectedness or unexpectedness will be naturally accounted for we must abandon (1) the presentation of the sounds in a two-dimensional feature matrix (which quite effectively obscures the complex interrelatedness between many of the features) and (2) the use of exclusively articulatory or exclusively acoustic-auditory features in specifying the sounds. Instead we must have recourse to physical models of speech in which are incorporated all of the physiological, acoustic, and perceptual parameters (or features) relevant to a given sound pattern. The value of such a physical model of velar activity in explaining, quite naturally, the expectedness of certain sound patterns involving nasals will be demonstrated.

Natural generative (NC) phonology is a theory of phonology which synthesizes into one coherent system the transformational generative phonology of Chomsky and Halle 1968; the implicational universals for segment inventories of Jakobson 1941, extended to segment sequences ("natural rules") in Chomsky and Halle 1968, Postal 1968, Schachter, Schane, Stampe, Vennemann (all 1969); the theory of syllabic phonology of Hooper 1971, Vennemann 1971b; the theory of analogy of Schuchardt 1885, Vennemann 1971a; and the theory of basic and derived phonological features of Ladefoged (Ladefoged 1971, Ladefoged and Vennemann 1971).

All natural phonological processes are catalogued in the theory, with information on the nuclear part and the succession of possible generalizations of each (Schuchardt 1885). Each language employs a large number of these processes unrestricted, e.g. English (but not Hindi, Gujarati) has Murmur → Nat(oral); English (but not German) has Round → Nat. The first step in the phonological description of each language is to determine those universal processes which do not operate unrestricted, and to block them by means of "anti-rules", e.g. Hindi, Gujarati (but not English) have Murmur → Nat; German (but not English) has Round → Nat. The second step is to determine which of the universal processes so blocked apply in a restricted form (restricted by either environmental conditions or ordering, Stampe 1969), e.g. Hindi (but not Gujarati) has Murmur → Nat / [__, V]; German has Round → Nat / [__, C, [__, V, [+back]].

A classification of, and notation for, natural phonological processes is presented. Most processes can be described as MANNER, PLACE, or SEQUENCE → Nat / X, e.g. vowel nasalization in French is represented as MANNER → Nat / [__, V] [+nasal]; nasal assimilation in Spanish is PLACE → Nat / [__, C, [+nasal] [+obstruent]; metathesis in Faroese is SEQUENCE → Nat / [__, (sk)lt] (t: syllable boundary). Finally, natural phonological processes are recognized as leading to loss, with the goal of creating a grammar of CV words. All other phonological processes, e.g. those motivated by the principle of maximal differentiation (Jakobson...
1941, Schane 1969), are recognized as not phonetically but conceptually motivated and therefore as outside the domain of natural phonological rules.

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ON THE FORMAL EXPRESSION OF NATURAL RULES IN PHONOLOGY

The realization of the failure of simplicity metric as an evalutatory measure of phonological descriptions has prompted a series of discussions centered around the notion of markedness. The author will argue that both simplicity metric and markedness theory fail to reflect the 'naturalness' of phonological processes and will propose a descriptive model that will mirror more accurately the plausibility of phonological rules.

Specifically: (i) Simplicity criterion presupposes that the optimal or the most natural phonological processes involve 'natural classes'. There is evidence that certain processes typically apply to sound units that constitute a 'natural class' not in Halle's sense, but in terms of physio-acoustic parameters. (ii) Marking conventions are, strictly speaking, pre-phonological and can play a role in the evaluation of phonological rules only when they function as 'linking rules'. It is obvious that certain phonological rules change only one feature, and consequently the formal relation of 'linkage' cannot obtain. In such cases marking conventions cannot function as linking rules. Subsequent attempts to extend markedness theory (by Postal, Schachter, Stampe, among others) entail serious problems. (iii) The author proposes to state phonological processes in terms of a finite set of 'metarules' each attached with universal constraints. These metarules and universal constraints define the outer limits of 'natural' human behavior in its phonological aspect.
Notice that my rule has redundant elements in it, violating the simplicity criterion. Yet I would claim that it has greater phonological motivation, making the rule more natural in the speaker's grammar. The simplicity criterion does not allow marking of processes, nor does it provide the best way of evaluating the grammar.

To illustrate this approach, I discuss three of Chomsky and Halle's rules for Southern Paiute (in their *The Sound Pattern of English*). The following treatment illustrates the method.

To account for geminate reduction, Chomsky and Halle (page 348) posit rule (a).

(a) \[-son\] - \(\emptyset\) / \([-son]\) \(\_\) \(+voc\) \(-cons\) \(+stress\)

If we introduce syllables into the discussion, adopt the notion of stress "strengthening" a syllable, and observe which of the segments is marked in the syllable, then we find that the wrong segment is deleted. I would instead posit rule (b), where ",", stands for a syllable boundary, and where the subscripts help to identify the segments in question.

(b) \[-son\] - \(\emptyset\) / \(+voc\) \(-cons\) \(+stress\) \(-son\) \(+voc\) \(-cons\) \(+stress\)

The first segment ends a weakened, unstressed syllable (in the marked position), while the second segment begins a strengthened, stressed syllable (in the unmarked position).
Fillmore suggests, following Bennett, that a case category of Path ought to be included in the conceptual case framework for verbs of motion. In this paper, I summarize the needs for some kind of syntactic machinery for verbs of motion to account for descriptions of the space intervening between sources and goals and agree that positing Path as a case is a desirable way to provide such machinery. I go on to point out, however, that Path as a case exhibits behavior that is significantly deviant from that of all other cases.

Although Path is well-behaved with respect to a centralized meaning and a set of characteristic prepositions associated with it, this case is pathological in the following ways:

1. Verbs that incorporate notions of Path can take overt expressions of Path with little or no restriction, while with other cases, incorporation of the case notion into the verb usually precludes overt expression of the case.

2. Path cannot be coreferential with Agent, while other cases can be.

3. Path is typically (always?) inanimate, while Source and Goal are animate.

4. Path, unlike Source and Goal, can readily stand in direct object relationship with verbs of motion.

5. When Path is eligible for Accusative Marking, it can undergo it or not optionally, while other cases must undergo Accusative Marking whenever they are eligible.

6. Path alone among all the cases can be repeated within a simple clause. Moreover, it can be repeated indefinitely many times.

7. There are certain temporal and spacial restrictions on the order in which repeated instances of Path can appear in a sentence.

That Path should be implemented as a case for verbs of motion is, I contend, indisputable; but any attempt to implement rules and structures for Path is going to have to take into account these pathologicals.
HANDOUT

The Pathological Case

I. [__ (A) O (L)]

II. [__ (A) O (S) (G)]

where: the blank is filled by a verb of motion
A = Agent
O = Object
L = Locative
S = Source
G = Goal
the parenthesize are optional.

(1) Sam ran in the building (because it was cold outside).

(2) Sam ran out of the building (because it caught fire).

(3) Sam ran into the building (because it started to rain).

(4) Sam carried the garbage from the kitchen to the alley.

(5) The bullets were fired from the Hunter College campus
through the Russian diplomat's window.

(6) Jim threw the watermelon over the fence.

(7) Sam carried the garbage from the kitchen through the back yard
into the alley.

(8) The bullets were fired from the Hunter College campus
through the diplomat's window into the wall of the room.

(9) Jim threw the watermelon over the fence to Sam.

III. [__ (A) O (P) (S) (G)]

(10) Nixon will go to Moscow via Peking.

(11) McCawley came to St. Louis along Interstate 55.

(12) Kissinger went through Pakistan to Peking.

(13) Sam went to the woods by way of (the location of) the hayfield.

(14) Sam went to the woods across (the surface of) the hayfield.

(15) Sam went to the woods through (the area of) the hayfield.

(16) a. Harry ran along the road. b. George jumped out of bed.

(17) a. Harvey gave money to charity. b. George loaned a book to Fred.

(18) a. Harry robbed the bank of five thousand dollars. b. George accepted the loot.

(19) a. Harry crossed the bridge. b. Salmon swim the Columbia every year.
c. Have you ever driven Interstate 80?
d. Go climb a tree.
e. Nixon will tour the Far East.

(20) a. Harry reached Chicago. b. George entered the room.
c. Peter left St. Louis early.
d. Harry arrived Chicago.
e. Peter departed St. Louis early.
f. Flight 457 departs St. Louis at 7:58 p.m.

(21) a. *Harry went the bridge. (Cf. examples in 19)
b. *Salmon move the Columbia every year.
c. *Have you ever raced Interstate 80?
d. Go pull yourself a tree.
(22) a. Harry crossed over the bridge. (Cf. examples in 21 and 19)
   b. Salmon swim up the Columbia every year.
   c. Have you ever driven along Interstate 80?
   d. Go climb up a tree!

(23) The ball flew through the air, through the window and into the room.

(24) Sam went from Chicago via St. Louis and Reno to San Francisco.

(25) Jim went out the door, over the hill, along the river, ... ,
    to grandmother's house.

(26) Sam went from Chicago to San Francisco via Joliet, Bloomington, Springfield, St. Louis, Kansas City, Salinas, Denver, ... .

(27) Sam was sitting in the park under a tree on a bench.

(28) Jim put the stamp in the corner on the front of the envelope.

(29) The kitten was on the rug under the table in the hallway.

(30) Jim put the stamp in the envelope's front's corner.

(31) The kitten was on the rug (which was under the table (which was in the hallway)).

(32) *Jim was in Chicago in Boston.

(33) *Sam moved the rock from the yard from the street to his basement.

(34) The plane flew to Chicago to Kansas City to Denver.

(35) The plane flew to Chicago and to Kansas City and to Denver.

(36) The ball flew (thru the air), (thru the window) and into the room.

(37) Jim went (out the door), (over the hill), (along the river), (to grandmother's house). (Cf. example 24)

(38) Sam went from Chicago to San Francisco via Joliet, Bloomington, Springfield, etc. (Cf. example 25)

(39) Sam drove his car from Louisville to Des Moines by way of Chicago and St. Louis.

(40) Sam drove his car from Louisville to Des Moines by way of St. Louis and Chicago.

(41) Sam went from Minneapolis to St. Paul via New Orleans.

(42) Jim flew from San Francisco via Chicago and Denver to New York.

(43) Sam went from Minneapolis to New Orleans and back to St. Paul.

(44) Jim flew from San Francisco to Chicago, back to Denver, and then on to New York.

(45) Sam went from Chicago via Joliet via Bloomington via Springfield to St. Louis.

(46) Jim carried the garbage from the kitchen to the alley by way of the back porch by way of the yard by way of the garage.

(47) The ball flew through the air, through the window and into the room.

(48) Jim went out the door, over the hill, along the railroad track to grandmother's house.
A speaker may use a wide variety of sentences to make the same request for non-verbal action by the hearer. For example, the sentences

- I request that you pick up the clothes
- Pick up the clothes (please)
- Will/would you pick up the clothes
- Can/could you pick up the clothes
- I would like it if you would pick up the clothes
- It is now time for you to pick up the clothes
- Why don't you pick up the clothes
- The clothes are still not picked up

are each different in syntactic form and in semantic interpretation but, when uttered under the appropriate conditions, can count as the performance of the illocutionary act of requesting non-verbal hearer action, in this case that the hearer pick up the clothes.

In this paper I will present a general specification of the class of English sentences which are standardly used to make a request for hearer non-verbal action and the conditions under which the utterance of such a sentence standardly counts as the performance of this type of request.

I will argue that the class of sentences can be defined as a function of the sentence meaning and the way in which the sentence relates to the following features associated with the act of requesting:

1) Utterance specifies a future voluntary action by the hearer
2) Speaker believes hearer is able to carry out the action
3) Speaker wants the action carried out
4) There are reasons for having the action carried out
5) It is not obvious that the hearer will carry out the action

For example, example (d) questions the hearer’s ability but its utterance standardly counts as a request for hearer non-verbal action if it is obvious to both parties that the speaker has the ability. On the other hand, the sentence “You can pick the clothes up” can be used to give permission (which does not entail the speaker believing in the hearer’s ability) but can also be used as a request for non-verbal action when both parties know of the hearer’s ability and the speaker is in the position of institutionalized authority. And sentence (g) which questions the reason(s) for which the hearer has not yet picked up the clothes can be used as a request for non-verbal action if both parties recognize that there is no good reason worth replying, i.e. the question was rhetorical.

The work reported on in this paper is but a small attack on the general problem of relating sentence meaning and sentence use. The thrust is orthogonal to the question of whether there are highest performative verbs underlying every sentence and raises once again the unresolved question of what constitutes linguistic competence and thus should be accounted for by a grammar of the language.
AN INTERACTIONAL ANALYSIS OF SAYULA POPOLUCA PERSONAL PREFIXES

A componential reanalysis of the personal prefixes of Sayula Popoluca, a Zoquean language of Mexico, improves upon the tagemic solution of Lawrence Clark, summarized in Figures 1-5; instead of five overlapping sets of prefixes there is one, instead of four persons there is a distinction between a speaker and an other, and instead of his distinction between descending order, where the subject person is numbered lower than the object person, and ascending order, where the object person is numbered lower, there is a distinction between afferent and efferent orientations, depending on the flow of action toward or away from the speaker himself or his surrogate, as summarized in Figures 7-8. Clark's use of 'third' and 'fourth' persons is made to fit his ascending / descending scheme; it has nothing to do with the familiar proximate / obviative distinction (see Figure 6). His solution also leaves a puzzling ambiguity in the use of 71- for either '3-2' or '2-1' combinations of subject and object persons. These shortcomings are eliminated by the restatement, which questions the priority given in tagemic descriptions to 'function' over form.

Figure 7 presupposes a structure based on Erving Goffman's analysis of face-to-face interaction and his two basic participation units, the individual, an individual, and the with, composed of a few people participating as a unit or single in interactions; in Figure 7 the two withs are enclosed by ovals. Efferent orientation inside a with is unmarked; across with boundaries it is marked by the - 0 element. Afferent orientation is marked by the - 1 element within or across with boundaries.

Further details of the Sayula restatement and a brief review of some features of other systems suggest important advantages of the interactional model over other approaches to the analysis and typology of pronominal systems.

Figure 1. Personal prefix sets from Clark 1962.

<table>
<thead>
<tr>
<th>Forms:</th>
<th>Subject and subject-object combinations:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intransitive</td>
</tr>
<tr>
<td></td>
<td>[IA]</td>
</tr>
<tr>
<td>to-</td>
<td>1</td>
</tr>
<tr>
<td>to-á-</td>
<td>---</td>
</tr>
<tr>
<td>to-ó-</td>
<td>---</td>
</tr>
<tr>
<td>?i-</td>
<td>---</td>
</tr>
<tr>
<td>?i-á-</td>
<td>---</td>
</tr>
<tr>
<td>?i-ó-</td>
<td>2</td>
</tr>
<tr>
<td>?i-gi-</td>
<td>---</td>
</tr>
<tr>
<td>na-</td>
<td>(1+2)</td>
</tr>
<tr>
<td>na-á-</td>
<td>---</td>
</tr>
<tr>
<td>ni-</td>
<td>2</td>
</tr>
</tbody>
</table>

Figure 2. Tense-aspect suffix sets from Clark 1962.

Gloss of A, B: | Set A: | Set B: | Set C: | Gloss of C: |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>'Continuative'</td>
<td>p</td>
<td>zero</td>
<td>zero</td>
<td>'Mod. descend.'</td>
</tr>
<tr>
<td>'Past'</td>
<td>am(p)</td>
<td>-sh</td>
<td>wa'n</td>
<td>'Neg. mod. descend.'</td>
</tr>
</tbody>
</table>

(Primary) (Secondary) | (Nodal) |
<table>
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<th></th>
<th></th>
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<tbody>
<tr>
<td>ak</td>
<td>'Mod. ascend.'</td>
</tr>
</tbody>
</table>

Figure 3. Combinations of personal prefixes and stem types.

Prefix | Verb stem + Suffix: | Noun stem, set: |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>yes</td>
<td>A yes</td>
</tr>
<tr>
<td>B</td>
<td>yes</td>
<td>B yes</td>
</tr>
<tr>
<td>III</td>
<td>yes</td>
<td>III yes</td>
</tr>
</tbody>
</table>

[58] [59]
Figure 4. Subjunctive and free pronominal particles.
Transitive subjunctives: Free pronominals:

Descending: Ascending:
ta- '1 - 2, 1 - 3' ma-ta-š- '3 - 1' e-š-š ~ e-š- '1'
na- '1(2)-3' ma-na-š- '3(2)-1' mi-iš- ~ mi-ih- '2'
pi- '2 - 3' pi-iš- '5 - 2, 2 - 1' he? '3'
na- '3 - 4' ma-na-š- '4 - 3' (+ zero, -wit) (+ -ak (plural))

Figure 5. Precidated substantives: 'staticives', 'possesives', and 'equationals'.
1. mi-háyaw 'You are a man.' 2 2 is R
2. mi-ih ayé 'You are the one.' 2 2 is R
3. láyayw 'It's a man.' 3 is R
4. ?i-n-tš?h 'your house' 2 - 3 2 has R
5. ayo-oh kuné?u 'It's a rabbit.' --- R is R
6. mi-ih to-wáy 'You are my son.' 2, 1 - 2 (2 is R) (1 has R)
7. a-sh na-š-wáy 'I am his son.' 1, 3 - 1 (1 is R) (3 has R)
8. a-sh ?i-š-wáy 'I am your son.' 1, 2 - 1 (1 is R) (2 has R)
9. he? to-n-wáy 'He is my son.' 3, 1 - 3 (3 is R) (1 has R)
10. ni-ih ?i-š-wáy 'You are his son.' 2, 3 - 2 (2 is R) (3 has R)

Figure 6. Uses of the prefixes in discourses (Clark 1961:62-3).
7. mit outspoken: 1 - 3 ta-š-š-b-k-š-at 4 ?i-há-š-k-p 2 p-tuh-š-k-š-1
ka-adu. 8. metš?k kahau-ná-ž-hat 2 ta-š-š-b-k-š-3 ná-š-p-š-at-š-m 4 ?i-gi-
7. And, when the witches, they are witches, they know how, they turned themselves into jaguars. 8. Two, jaguars, were going, to enter [her] house. 9. They say, that the woman's husband walked here.

Figure 7. Interactive pattern of the primary forms.

Figure 8. Semantic dimensions and features; componential definitions.
Participant: Speaker / Other S / O
Orientation: Afferent / Afferent A / E

Componential definitions of primary forms:
ta- 'S' ?i- 'O' na- 'SO'
to- 'E' ?i-á 'CA' na-á 'SOA'
to-n 'SE' ?i-n 'OE'
Marked orientations are reversed in secondary environments.
The goal of this paper is to show the plausibility of G. Lakoff's (1973:340) claim that "the principles governing the distribution of morphemes will involve presuppositional information". In other words, the applicability of transformational rules depends on the speakers' presupposition: either obligatory or blocked if the speakers share certain presupposition concerned about a sentence in question; optional if such sharing is absent among speakers.

One of the major processes in Korean syntax (also in Japanese and many other languages for that matter)—the deletion of reflexive pronouns—illustrates this point. Three cases are considered: 1. where the deletion is blocked; 2. where the deletion is obligatory; 3. where the deletion is optional or up to the individual.

Case 1. There seem to be two uses of NP on the surface, depending on whether it was an argument (Geach calls this materialistically used NP) or a predicate (formally-used NP) in the logical structure. *John* in 'John is a genius.' spoken with normal declarative sentence intonation is an example of the former, and *John* in 'John is a genius.' as when one is answering such a question as 'Who is a genius?' is an example of the latter. Only formally-used NP's carry new information of a sentence. When a Korean reflexive pronoun stands for a formally-used NP, it is never deleted. And this can be explained only in terms of the sharing of the presupposition among speakers that its deletion will bring about ambiguity as to the reference.

Case 2. There are verbs which require the coreferentiality between their subjects and the subjects of embedded sentences, such as *sigh* 'feel like'. One cannot feel like someone else's doing something. The speakers of Korean presuppose that because of the like-subject constraint for such a verb, the ambiguity is not possible as to the reference of the embedded subject once one knows the reference of the matrix subject. This seems to make the deletion obligatory.

Case 3. When there is no such sharing of presupposition, the deletability is left up to the judgment of individual speakers. If the speaker makes the presupposition that the ambiguity as to the reference of a reflexive pronoun is likely, he will mandatorily leave it; otherwise, he will obligatorily delete it. So, the applicability of the so-called optional rules is not left to the speaker's unconditioned arbitrary choice. In most cases of optional rules, the speaker is actually forced to choose either or not the application of a rule, and this not by a shared presupposition but by the situational judgment of each individual.

Both in case 1 and 2, grammaticality judgment rarely varies. But in case 3, we see many variations of grammaticality judgment, which seem to come from the informant's different range of presupposition at the particular moment.
HANDOUT

Presupposition and Grammaticality Judgment of Sentences

(1) a. I get my paycheck tomorrow.
   b. *I get a cold tomorrow.

(2) a. The astronauts return to the earth tomorrow.

(3) a. Sam gets a day off tomorrow.
   b. *Sam enjoys his day off tomorrow.

(4) a. *John-nànn cakì-kà Shakespeare-làll caki-by chinku-tàl-
       John-T (him)self-S Shakespeare-O self-of friend-PL-
       eykey ilkecu-ki-làll cohabanta
       to read-NOM-O likes
   'John likes to read Shakespeare for his friends.'
   b. John-nànn Shakespeare-làll chinku-tàl-eykey ilkecu-ki-làll
       cohabanta

       John-T Mary-O send-instead of self-S go-will-OT
       malhayessta
       said
   'John said that he would go himself instead of sending
   Mary.'
   b. *John-nànn Mary-làll ponay-nànn taysin ka-keysta-ko
       malhayessta

(6) a. John-nànn caki-ka eccey cecilli-n silsu-ey tayhayessta
       John-T self-S yesterday made-REL mistake-about
       sakwahayessta
       apologized
   'John apologized for the mistake that he made yesterday.'
   b. John-nànn eccey cecilli-n silsu-ey tayhayes sakwahayessta

ilkecu-ki-làll cohabanta
read-NOM-O likes

(5') John-nànn John-ka Mary-làll ponay-nànn taysin John-ka
John-T John-S Mary-O send-instead of John-S
ka-keysta-ko malhayessta
go-will-OT said

(6') John-nànn John-ka eccey cecilli-n silsu-ey tayhayes
John-T John-S yesterday made-REL mistake-about
sakwahayessta
apologized

(7) REFLEXIVIZATION:
U MP \ W (X, MP, Y) Z 1, caki, 3
   1 2 3

(8) a. *John-nànn cakì-kà Mary-làll salhayha-n hyemiy-làll
       John-T self-S Mary-O murdered-REL suspicion O
       patassta
       received
   'John was suspected to have murdered Mary.'
   b. John-nànn Mary-làll salhayha-n hyemiy-làll patassta
(9) a. **John-nan caki-ka Shakespeare-lil ikey-toy-ki-lil palamba**
   John-T self-S Shakespeare-O read-become-NOM-O hopes
   'John hopes that he will be appointed to read Shakespeare.'
   b. **John-nan Shakespeare-lil ikey-toy-ki-lil palamba**

(10) a. **John-nan caki-ka Mary-lil salhayha-n yayki-lil hayessta**
   John-T self-S Mary-O murdered-REL story-O did
   'John told the story of (his) having killed Mary.'
   b. **John-nan Mary-lil salhayha-n yayki-lil hayessta**

(11) a. ?**John-nan caki-ka chawta-ko malhayessta**
   John-T self-S cold-QT said
   'John said that he was cold.'
   b. **John-nan chawta-ko malhayessta**

(12) a. ?**John-nan caki-ka suyeng-lil ha-ko sipta-ko**
   John-T self-S swimming-O do-NOM want-QT
   malhayessta said
   'John said that he wanted to swim.'
   b. **John-nan suyeng-lil ha-ko sipta-ko malhayessta**

(13) a. ?**John-nan caki-ka enehak-lil cemkongha-keyesta-ko**
   John-T self-S linguistics-O major-will-QT
   malhayessta said
   'John said that he would major in linguistics.'
   b. **John-nan enehak-lil cemkongha-keyesta-ko malhayessta**

(14) a. ?**John-nan caki-ka chayk-lil sacu-ma-ko Mary-eykkey**
   John-T self-S book-O buy-qill-QT Mary-to
   yaksokhayessta promised
   'John promised Mary that he would buy a book for her.'
   b. **John-nan chayk-lil sacu-ma-ko Mary-eykkey yaksokhayessta**

(15) If the subject of the embedded sentence is required to be
    correferential with that of the matrix sentence either
    because of the matrix verb or because of the embedded
    verb, the embedded subject is obligatorily deleted.

(16) a. **John-nan caki-ka suyeng-lil ha-ko sipta-ko malhayessta**
   John-T self-S swimming-O do-NOM want-QT said
   'John said that he wanted to swim himself.'

(17) a. John likes to see Mary.
   b. John likes to see Mary.

(17') a. **John-nan 'Mary-lil pong-y-nan tayair na-ka ka-koyssta'**
   John-T Mary-O send-instead of I-S go-will
   hako malhayessta
   QT said
   'John said, "I will go myself instead of sending Mary."'
   b. **John-nan 'Mary-lil pong-y-nan tayair na-nan ka-koyssta'**
   hako malhayessta

(16') a. **John-nan 'na-ka suyeng-lil ha-ko sipta' hako**
   John-T I-S swimming-O do-NOM want QT
   halhayessta
   said
   'John said, "I want to swim myself."'
(16') b. John-nán 'ne-nán suyeng-lá) ha-ko xiptla' hako
malhayessa

     John-T self-S Mary-with separate-REL day-a
     kiekhakoisita
     remembers
     'John remembers the day when he left Mary.'

b. John-nán Mary-kwa heyeci-te-1 nal-lá. kiekhakoissta

(19) Speaker A: (tangsín-nán) cikke etey kaseyó?
     you-T now where go-QUESTION
     'Where are you going?'

Speaker B: 1. ne-nán cikke hakko-ey kapni:a
     I-T now school-to go
     'I am going to school now.'

ii. hakko-ey kapnita
     '(I) go to school (now).'

(20) When and only when the speaker presupposes that resultant
     ambiguity is not likely may reflexive pronouns
     conveying redundant information be deleted.

(21) a. John expects to be elected.

b. John expects himself to be elected.

In recent work by George Lakoff, James McCawley, and others of the
Generative Semantics school it has been claimed that semantic repre-
sentations resemble formulae in formal logic, consisting of quantifiers,
variables, constants, and a number of "atomic predicates," including a
finite subset (CAUSE, COME ABOUT, REMAIN, NOT, etc.) which take pro-
positions as arguments. In classical logic the representation of "timeless"
states is straightforward; however, events, actions, processes, all of
which involve changes of state in time, cannot be directly represented.
Hence the development of "tense logics," "logics of action," "logics of
change," etc., by logicians such as A.N. Prior and G.H. von Wright. These
systems allow one to represent an event or action as a combination of
static propositions in a semantic model consisting of a set of world-
states which are temporally ordered. I will argue that from the linguist's
point of view as well, no theory gives an adequate account of the semantics
of the atomic predicates COME ABOUT and REMAIN in natural language unless
the temporal change-of-state relationships underlying them are somehow
further defined in that theory. The purpose of the paper is to show how
a logical system can provide the linguist with the kind of mathematical
model he needs to capture these relationships in a semantics-based theory:
The possibility of applying this method to other atomic predicates is clear.

G.H. von Wright observed that an event consists essentially in one
state of affairs being replaced by another. Thus "the door closed" is
true when the state in which "the door is not closed" is followed in time
by the state in which "the door is closed." To represent this formally,
he devised a logic with the dyadic operator N (which is read "and next").
In this system there are four basic kinds of formulae: (pNp) "the state p
remains unchanged," (¬pNp) "the state p comes about," (pN¬p) "the state
p is destroyed," and (¬pN¬p) "the state p fails to come about." By
equating the semantic representation COME ABOUT(p) with von Wright's
(¬pNp) and REMAIN(p) with pNp), we not only specify the logical rela-
tionship between the two atomic predicates, but we also specify their
relationship to the simple stative \( p \). This also explains the fact that a sentence like "John closed the door at 10 PM" entails "(Just) before 10 PM the door was open." It is shown that all aspeccual verbs (such as `begin`, `continue`, `stop`, `finish`, etc.) show a parallel patterning with respect to their entailments.

This analysis serves to enlighten another problem in the semantics of aspect. There is a class of verbs, which includes `recognise`, `find`, `discover`, `arrive`, `die`, etc., which are called achievement verbs by philosophers Gilbert Ryle and Zeno Vendler. This class can be characterized by well-defined semantic and syntactic criteria; the criteria fail, however, just in case the verbs occur in a sentence with any non-specific NP. If these verbs are analyzed as having `COME ABOUT` as highest atomic predicate, then their semantic properties are explained and the peculiar fact about non-specifics follows automatically from the above analysis.

The significance of this kind of study is twofold: (1) It shows how linguistic semantics can benefit from research already done by logicians, e.g. the mathematical properties of these systems are known. (2) Since it suggests that certain proposed "atomic predicates" must be defined in terms of even more primitive semantic notions, it questions the basis on which linguists argue for concepts such as atomic predicates.

**HANDOUT**

Logical Models for the Interpretation of Atomic Predicates
in Generative Semantics

(1) a. The soup cooled.
   b. The soup is cool.

(2) a. The door closed.
   b. The door is closed.

(1') `COME ABOUT(cool(the soup))`
(2') `COME ABOUT(closed(the door))`

A tense-logical model set may be defined informally (for our purposes) as a set of temporal world-states \( [t_1 \ldots t_n] \) ordered by the transitive, asymmetrical relation \( R \), the "earlier-than" relation. A given proposition \( p \) may be either true or false in any given world-state \( t_i \). Quantifiers may range over individuals or times (world-states).

the basic tense operator \( T(p,t_i) \) "proposition \( p \) is true at time \( t_i \)"

definitions of other tenses, \( F \) "future" and \( P \) "past", in terms of \( T \):
(4) \( F(p) \) is true at \( t_i \) iff \((\exists t_j)(T(p,t_j)&&R(t_j,t_i))\)
(5) \( P(p) \) is true at \( t_i \) iff \((\exists t_k)(T(p,t_k)&&R(t_k,t_i))\)

Von Wright's **And Next** operator:
(5) \( pNq \) is true at \( t_i \) iff \( T(p,t_{i-1})&&T(q,t_i) \)

the four basic formulae in Von Wright's system:
(6) a. \( \neg pNp \) "the state \( p \) comes about"
   b. \( pNp \) "the state \( p \) remains"
   c. \( (pN-p) \) "the state \( p \) ceases to be"
   d. \( \neg pN-p \) "the state \( p \) fails to come about"

definitions of aspeccual atomic predicates in terms of **And Next**
(7) `COME ABOUT(p) = def. \( \neg pNp \)`
(8) `STOP(p) = def. \( pN-p \)`
(9) `REMAIN(p) = def. \( pNp \)`
various surface manifestations of COME ABOUT ("inchoative aspect")

(8) a. The soup cooled.
   b. The wax hardened.
   c. John began to run.
   d. It started to snow.
   c. John came to believe that the earth is flat.
   f. John went crazy.
   g. John got drunk.
   h. John sat on the bench.(ambiguous)
   i. He thought about it, and suddenly he knew the answer.

characteristics of achievement verbs:

(9) a. do not occur with durative adverbials (for an hour, etc.)
   b. do not occur as complement of aspectual verbs (begin, stop)
   c. do not occur as complement of finish
   d. do not occur with studiously, attentively, conscientiously, etc.

plural indefinites: cases where achievement verbs behave like non-achievement verbs:

(10) *John discovered the buried treasure in his yard for six weeks.

(11) John discovered [fleas on his dog] (crabgrass in his yard) for six weeks.

(12) *John discovered that picturesque village for years.

(13) Tourists discovered that picturesque village for years.

(10') (vt|t ε six weeks)(T(COME ABOUT(John knows...)),t_i)
    mapping onto model set: ...t_i-2, t_i-1, t_i, ...
    ~ P, contradiction

(11') (vt|t ε six weeks)(T((3x) COME ABOUT(John knows...x...)),t_i)
    mapping onto model set: ...t_i-2, t_i-1, t_i, ...
    (3x)-f(x), (3x)f(x)
    ~ (3x)-f(x), (3x)f(x)
    no contradiction

[72] Alan Bell, University of Colorado
AGAINST THE DISTRIBUTIONAL SYLLABLE

In the past 20 years, Kurylowicz, O'Connor and Trim, Arnold, Haugen, Greenberg, and Pulgram have advocated theories of the syllable having in common two assumptions: the syllable can and should be defined formally, without reference to phonetic realization; and the syllable is derivable solely from the distributional properties of segments. Hence the term distributional syllable.

These theories deserve opposition because, largely ignored by linguists who reject them, they are sometimes accepted as fact in descriptive work; and because the issues pertain to the development of syllabic theory in generative phonology.

The distributional syllable is defined by procedures for determining the syllabicity and syllabification of segments. O'Connor-Trim and Greenberg's procedures for distinguishing nuclei work for most languages, but they fail for many types of languages containing syllables without margins and/or syllabic consonants. The failures are not just dismissible exceptions, but illustrate that the procedures are based on invalid assumptions about the distribution of syllabicity.

The syllabification procedures are based on the Word-terminal Condition: roughly, syllable margins do not violate the distributional constraints of initial and final margins. A counterexample to this presumed universal is given. Where the Word-terminal Condition does not determine the point of syllable division, a common occurrence, the distributional theories differ on syllabification procedures. Even granting the validity of the Word-terminal Condition, the procedures' results are unsatisfactory in many cases. As with syllabicity above, the failures derive from invalid assumptions about syllabification.

The failures of past theories of the distributional syllable suggest that it is a dead end in the maze hiding the explanation of the organization of segment strings. The nature of the failures indicates that the syllables which have a nonarbitrary connection with the phonetic level and which are not derivable entirely from segment characteristics are a more promising construct.

[73]
A grammar without autonomous phonemics fails to account fully for contrast and repetition (the absence of contrast) using the only way proposed so far, Postal's criterion relating NP (narrow or "systematic" phonetic) and MP (morphophonemic) representations (chs. 1 and 9 of his Aspects). There are problems for 1) complete repetition, and 2) partial repetition.

1) Postal's formulation is unclear. For two NP strings to repeat, it could mean either that (a) they can be assigned to the same MP representation by the P-rules, or (b) taking a particular derivation for each, they are both paired with the same MP representation. But both fail: (a) wrongly predicts that, in the dialect mentioned by Postal on p. 222, /they/ (= [bey] or [d ey]) and /day/ (= [d ey] only) never contrast. (b) wrongly predicts that German /bunt/ from MP /bunt/ and /buntl/ from /bund/ contrast. Defining one free variation set for each MP representation works better but requires matching whole sets, which is unfeasible for performance when there are many possible free variants.

2) There is intuitive reality to a nonphonetic notion of partial repetition as manifested, e.g. in most rhyme. Complete repetition is related to and may be viewed as a special case of partial repetition. The fact that conditioning may come from the contrasting portions is impossible to predict partial repetition using a relational criterion like Postal's. This is shown by the impossibility of differentiating a pair of examples like:

English:  

- partial /'pɜ r'tɪ l/  
- ministerial /'mɪnɪstərɪəl/  

The underlined portions contrast.

Russian:  

- "mother" /matə/  
- "five" /p'atə/  

The underlined portions repeat (and rhyme!).

The evidence given in this paper requires that we reconsider autonomous phonemics, since it is the only theory so far proposed that succeeds fully in characterizing all repetition.

(1) Paul K. Postal, Aspects of Phonological Theory, p. 14:

Two distinct phonetic representations are in the same free variation set and hence descriptive of noncontrastive utterances just in case they are assigned by the rules of the phonology to the same single input systematic phonological representation and not otherwise. Nondistinctive (identical) phonetic representations are, of course, always in the same free variation set regardless of which systematic structures they are assigned to.

(ii) (a)  

NP:  

/they/  
/they/  

(AP)  
opt. [d] = [d]/\#  

NP:  

1. [d ey] 2. [d ey] 3. [d ey]  

(b)  

MP:  

/bunt/  
/bunt/  

[-son] = [-voice]/\#  

(AP)  
opt. [-cont] = [wasp]/\#  

NP:  


(iii) Partial repetition (which includes most rhyme) disregards non-distinctive (low-level) variation:

- glee = [glɪ]  
- plea = [pɿɪ]  

/ɪ/ is voiceless after voiceless initial stop.

- cat realized as [æt]  
- hat realized as [hæt]  

Final vcls. stop is optionally unreleased.

Russian [mat] /p'mat/  
/a/ is non-distinctively fronted after palatal consonant.
However, partial repetition does depend on the morphophonemic rules:

**partial** /i/ becomes /y/ by rule (16), ch. 5, SPE (Chomsky & Halle), and /y/ is deleted after /i/ by rule (38), ch. 5.

**ministerial** The change of /i/ to /y/ by rule (16) is prevented by the /r/ in minister.

(11) At AP: English: /ministerial/  Russian: /mat'/

(12) /parəəl/  /p'arəəl'/

(v) We can define partial repetition directly as partial AP identity and partial contrast as partial AP nonidentity. Note that this claims that 2 in (11) above is ambiguous between either of two contrasting representations, since it can have either of two AP sequences. Alternatively, we could use interpretation (b) of Postal’s definition of free variation set (given on the abstract), replacing MP with AP.

Frank Heny, University of Massachusetts

**PITCH-ACCENT IN SHONA AND OTHER BANTU LANGUAGES**

This paper reports results from a study of the grammatical significance of pitch in Shona and related languages. The results are shown to support a particular theory of pitch-accents.

Pitch can function in very different ways in a grammar. In Mandarin Chinese, vowels include segmental pitch features; yet in Japanese pitch changes appear to function like English stress to mark particular syllables—a phenomenon that has been called “pitch-accent”. Attempts to formulate a theory of pitch-accent have not met with notable success and we still understand very little of the nature of those rules that introduce, move, modify and realize such an accent. We know nothing of the constraints that must be placed upon a pitch-accent system in natural language.

It has been argued that while Luganda (a Bantu language) has pitch-accent, Shona (another Bantu language) has a rather special kind of “tone”, i.e., pitch is a segmental feature somewhat as in Chinese. That analysis may still be viable, although it leads to a number of problems since, for example, Shona and Luganda are otherwise very similar. Moreover, it is now clear that too much emphasis was placed, in researching and justifying that analysis, on the existence of forms like akhroro (a three-syllable verb stem with prefixes—participial), where high and low pitch appear to alternate, and there seems to be no justification for postulating that a change in pitch level serves to mark any syllable, as it does in Japanese and, arguably, in Luganda. It turns out that four and five syllable stems analogous to our example are realized thus: akhroro and akhrororo. The apparent alternation observed earlier was purely an artifact of the short examples hitherto considered adequate. The longer forms indicate that first and last stem syllables are marked by a change in pitch level.

These, and other fresh results from a newly-studied dialect provide clear evidence for analyzing Shona as having pitch-accent, and for revising the theory of pitch-accent to include the language. A definition is required which makes crucial reference to the output of a pitch-accent
system: it marks certain syllables in each construction by a change in level. A limited set of "ordinary" phonological rules can affect pitch features within such a system, but they appear to be subject to severe (and probably universal) restrictions of the sort that have come to be called "conspiracies".

The theory of pitch-accent outlined here is very briefly shown to be further supported in that it motivates a single, rather unexpected analysis of pitch in Luganda nouns and verbs, which differ superficially from each other in quite striking ways.

M.N.R. Hall, Queens College, City University of New York
Beatrice L. Hall, State University of New York at Stony Brook

VOICED LENGTH IN YIDDISH

Standard Literary Yiddish (SLY) is unusual among West Germanic languages in that it lacks any surface vowel length. It is the purpose of this paper to demonstrate that this is only an apparent anomaly and that vowel length must be postulated in the underlying phonological structure. SLY has, of course, no real existence — it is a compromise dialect developed to serve the needs of all the speakers of Eastern Yiddish. It lacks surface vowel length because the dialects of Northeastern Yiddish (NEY) also lack surface vowel length. We shall demonstrate that NEY too has underlying vowel length and also that, in those dialects of Yiddish which have surface length, this is not underlying vowel length but rather the result of the operation of a secondary lengthening rule.

The crucial evidence lies in the facts of umlaut, as shown by the words /hoys/ 'house' and /boym/ 'tree'. Both of these words form their plurals by the addition of /-er/ which causes umlaut. The plural of /hoys/ is /hɔyzer/ while that of /boym/ is /beymer/. It is therefore obvious that the underlying form of /hoys/ is different from that of /boym/. The facts of umlaut lead us to the conclusion that the form underlying /hoys/ is || hūz || while that underlying /boym/ is || b̃m ||. In dialects with surface length /hoys/ and /hɔyzer/ occur as /hɔs/ and /hūzer/; we shall argue that these dialects have the same underlying forms as those postulated for SLY and undergo a secondary process of monophthongization and lengthening.

We shall maintain that all Eastern Yiddish dialects share an identical phonological structure and differ from each other only in the order and number of rules rather than having two different underlying structures (one for NEY, another for Central and Southern Yiddish) as is postulated by Herzog in The Yiddish Language in Northern Poland (JYAL 34.2 part 3, 1965).
Few morphophonemic alternations of English have been offered as many alternative analyses as the alternation of inflectional endings. The problem is how to represent the plural and the preterit in the lexicon, and how to account for the well-known phonetic facts. Different analyses have been offered within both structuralist and generative frameworks, yet currently available evaluation measures fail to choose a unique solution. The present paper first discusses the theoretical issues of the problem, and then shows that the notion of surface phonetic constraints, which I introduced to this Society a year ago, provides another basis for evaluating alternative analyses, so that we can pick the right solution to the problem.

The paper also touches upon a much more general problem of why particular P-rules have the forms that they do. This discussion includes evidence from recent findings in socio-linguistic studies.

(1)  \begin{align*}
\text{hit}s & \quad \text{kid}s & \quad \text{hin}s
\end{align*}

\begin{align*}
\text{UR:} & \quad /\text{hit}\$s/ & /\text{kid}\$s/ & /\text{hin}\$s/
\end{align*}

\begin{align*}
\text{Rules:} & \quad \text{hit}s
\end{align*}

\begin{align*}
(1\text{a}) & \quad \text{hit}s
\end{align*}

\begin{align*}
(1\text{b(i)})) & \quad \text{kid}z
\end{align*}

\begin{align*}
(1\text{b(ii))}) & \quad \text{hin}z
\end{align*}

\begin{align*}
\text{Result:} & \quad \text{hit}s \quad \text{kid}z \quad \text{hin}z
\end{align*}

\begin{align*}
\text{Rules:} & \quad \phi - \iota [-\text{sonorant}] \phi \quad [\text{+sonorant}]
\end{align*}

\begin{align*}
(1\text{c}) & \quad \phi - \iota [\text{+sonorant}] \phi
\end{align*}

\begin{align*}
(1\text{d}) & \quad \phi - \iota [\text{+sonorant}] \phi
\end{align*}

\begin{align*}
\text{(2)} & \quad \text{hit}s \quad \text{kid}s \quad \text{hin}s
\end{align*}

\begin{align*}
\text{UR:} & \quad /\text{hit}\$s/ \quad /\text{kid}\$s/ \quad /\text{hin}\$s/
\end{align*}

\begin{align*}
\text{Rules:} & \quad \text{hit}s \quad \text{kid}s
\end{align*}

\begin{align*}
(2\text{a}) & \quad \text{hit}s \quad \text{kid}s
\end{align*}

\begin{align*}
(2\text{b(i))}) & \quad \text{kid}z
\end{align*}

\begin{align*}
(2\text{b(ii))}) & \quad \text{hin}z
\end{align*}

\begin{align*}
\text{Result:} & \quad \text{hit}s \quad \text{kid}z \quad \text{hin}z
\end{align*}

\begin{align*}
\text{Rules:} & \quad \phi - \iota [\text{+sonorant}] \phi
\end{align*}

\begin{align*}
(2\text{a}) & \quad \phi - \iota [\text{+sonorant}] \phi
\end{align*}

\begin{align*}
(2\text{b}) & \quad \text{hit}s \quad \text{kid}s
\end{align*}

\begin{align*}
\text{UR:} & \quad /\text{hit}\$s/ \quad /\text{kid}\$s/ \quad /\text{hin}\$s/
\end{align*}
A Sketch of the Accentual System of Lithuanian

The Lithuanian accentual system is characterized by the fact that in inflectional and derivational paradigms a given stem may undergo changes not only in the location of the accented syllable but also in the nature of the accent (e.g. falling - rising). It will be shown that those fairly complex alternations can be handled in the following fashion:

a) long vowels are viewed as sequences of short vowels
b) each word has a tone contour where the initial portion is neutral pitch and the terminal portion is of high pitch
c) the onset of high pitch is marked by supplying high pitch to some vowel in the word (this is done either in the lexical entry of the stem or by special rules)
d) a phonological rule (H-DISTRIBUTION) subsequently distributes the high pitch to all vowels that follow the vowel with high pitch

e) the accent is located on the syllable containing the first vowel with high pitch. When this syllable has two moras, high pitch can be on both moras or only on the second. In the former case we say that the syllable has the acute accent (traditionally marked with ' as in kūja); in the latter case we say that the syllable has the circumflex accent (traditionally marked with ~ as in ąūdis).
f) certain specifically marked word-forms are subject to the minor rule of H-DELETION which removes the high pitch from the stem. Such forms are subject to a late rule which assigns high pitch to the last intonable mora in the word

g) words with high pitch onset on the penult mora are subject to METATONY which moves the high pitch onset to the last mora.

The presentation will motivate the rules sketched above, as well as the assumptions underlying them.
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<thead>
<tr>
<th>Stem</th>
<th>Class 1</th>
<th>Class 2</th>
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### Class 3

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### (21)

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<tr>
<th>Stem</th>
<th>Desinence</th>
<th>H-REMoval (Gs and Dp only)</th>
<th>H-DISTRIBUTION</th>
<th>METATONY</th>
<th>H-ASSIGNMENT</th>
<th>ORTHOGRAPHY</th>
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<td>Pelyžas (+lab)</td>
<td>-oos Gs</td>
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<tr>
<td>žièm (+lab)</td>
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</table>
(23) Non-stem-final + H-onset
Naa jāunaas gārdhās gbras slīdās
Gaa jāunooc gārdabās gbroo slīdabās
Daa jauñām gārdāñām gěrm slīdāñām
Aaa jāung gārdyō gěrō slīdō
Iaa jāunu gārdžu gěrā slīdāh
Laa jauñāmē gārdžīamē gerām slīdžīamē

(25) Naa kurčis 'who'
Gaa kuriob
Daa kurīam (-am has its own H-onset)
Aaa kurīl
Iaa kuriob
Laa kurīamē

(27) N ā
G manēbas
D mān
A manē
I mantāal
L manyyjē

(39) 4 moras from end
1s nūokysis gašūri gavēnsi piškis mięgū
2s nūokysi gašū gavēnsi piški mięgū
1p nūokysim gašūs gavēnsim piškim mięgūsm
2p nūokysit gašūs gavēnsit piškis mięgūsm
3p nūokys gašūs gavēs piškis mięg

(39) 2 moras from end
1s napsbōju āugu vedū gavēnū randhū
2s napsbōjī āugi vēdī gavēnul randīl
1p napsbōjame āugan vēdams gavēname rahnême
2p napsbōjate āugate vēdate gavēnate rahnâte
3p napsbōja āuga vēda gavēna rahnā

(37) 1s jookeš 'I laugh'
2s jookeš
1p jūkįmē
2p jūkišš
3 jūkįs

(39) Prefinal + H
Metony
Final + H
H-Removal

Pros.
1s vālgau perkū mātāb
2s vālgai perkli mātal
1p vālgome pelkiame mātome
2p vālgote pektate mātote
3 vālgo pektka māto

Past
1s vālgiau pirkū macijaū
2s vālgai pirkal matal
1p vālgėme pirkome mātėme
2p vālgėte pirkote mātėte
3 vālgė pirkko mātė

[86]
In the analysis of metaphorical proverbs, subjects need to disregard their quasi-descriptive appearance in order to arrive at their traditional meanings. The central processes important to adequate paraphrase are superordinating and disambiguation. These processes are related primarily to two aspects of linguistic structure, to semantic features, and to case relations. A study of twenty subjects' paraphrases of ten proverbs helped to clarify the nature of this relationship.

Superordinating is a process by which one can establish governing categories of semantic features to account for the meanings of proverbs. Since proverbs are fixed utterances, almost like words themselves, these categories of semantic features appear to apply to them as a whole. In the paraphrases studied, three principal categories of semantic features were dominant: (1) Human or Indefinite; (2) a category based on types of attitude or actions such as Achievement, Persistence, Anticipation, Competition, Desirability, and Reciprocation; and (3) a feature of Evaluation.

Disambiguation is a process by which one distinguishes the literal, quasi-descriptive sense of proverbs from their use as utterances circumspectly offering advice, consolation, or warning. One way to disambiguate is to establish semantic categories. Another, complementary method is to recognize that the case relations among the nouns, verbs, and adjectives of proverbs may alter depending on the sense one gives to them. As quasi-description Big fleas have little fleas signals the relations of Agentive and Factitive. As a proverb suggesting an instance of disagreeable competition or antagonism, the relevant cases are Dative and Agentive. These differences are evident in the paraphrases "People have children" and "Annoying bigshots have to put up with the barbs of their underlings." Thus disambiguation serves implicitly to sort out appropriate case relations, as well as the governing semantic features.

The superficial and pertinent aspects of proverbs are important to them; the very interplay between the quasi-descriptive and the advisory in so many of them is an aspect of their nature. But one has to recognize
Table 1. Proverbs Submitted For Interpretation

| The best is the enemy of the good. | Big fleas have little fleas. |
| Big fleas have little fleas. | What is bred in the bone will not out of the flesh. |
| A chain is no stronger than its weakest link. | The cobbler should stick to his last. |
| Constant dropping will wear away a stone. | Four eyes see better than two. |
| There is no place like home. | It is better to have loved and lost than never to have loved at all. |

A straw may show which way the wind blows.

Abstract/Human:  | Other:  |
Social-Psychological Concern:  | Physical or Natural Event:  |
Evaluation:  | Attitudes or Actions:  |
Positive:  | Achievement:  |
Negative:  | Anticipation:  |
Noncommittal:  | Competition:  |
Desirability:  | Persistense:  |
Reciprocation:  |

Figure 1. Ordered Classes of Superordinates

Table 2. Sample Responses Exhibiting Patterns of Superordinates

(1) Proverb: Constant dropping will wear away a stone.
Response: Constantly making errors, constantly doing things that one shouldn't, is going to wear away the personality, the sharp points of your individuality.
Superordinates: Human-Social Concern-Persistence-Negative

(2) Proverb: The best is the enemy of the good.
Response: Like a high school situation when one person is really wanting to be valedictorian or something stupid like that and there are two who are very near to it, and only one is going to achieve it.
Superordinates: Human-Social Concern-Achievement-Desirability(2/3)-Negative

(3) Proverb: A straw may show which way the wind blows.
Response: A very minor point, very small indication, can show a trend in a general direction, out of proportion to what it in itself signifies. One example is that a number of people working together and one person starts getting annoyed, that would be a sign of a break-up in the future.

Superordinates: Abstract(2/3)-Human(2/3)-Anticipation-Negativ(2/3)

Table 3. Sample Responses Exhibiting Different Patterns of Case Relation

Proverb: A straw may show which way the wind blows.
Response 1: If it bends in a certain direction, it will bend in the direction that the wind is blowing. If everyone was going one way and you couldn't help yourself, you'd be swept up and be moved.
Case Relations: You in relation to the VP swept up is Dative.
Response 2: Any person, no matter what status or position, may at times show other people or guide them or make some useful contribution.
Case Relations: Person in relation to VP guide is Agentive.
Proverb: The cobbler should stick to his last.
Response 1: A sculptor uses a chisel. What if he used a screwdriver; it wouldn't be as good.
Case Relations: Chisel and screwdriver are related to the VP use as Instrumental.
Response 2: In general, this indicates that a person should do the work that he knows.
Case Relations: Work in relation to the VP do is Objective.
Proverb: Big fleas have little fleas.
Response 1: It's like women have children.
Case Relations: Women as Agentive, children as Factitive in relation to the VP have.
Response 2: The leadership of the South Vietnamese government as a parasite on the US has its own little parasites in village chiefs.
Case Relations: Leadership as Dative, parasites as Agentive in relation to the VP has.
M. Stephen Straight, State University of New York, Stony Brook
THE TRANSFORMATIONAL-PSYCHOLINGUISTIC SEMANTICS OF KIN TERMS

In his 1968 paper, "Some generative rules for American kinship terminology" (Anthropological Linguistics 10(6):1-6), Philip K. Bock presented 30 ordered rules for the generation of American kin terms. The primary aim of the present paper is to revise Bock's rules so as to (1) increase the number of linguistic intuitions accounted for by them, (2) bring them more into line with current work in so-called "generative" (actually transformational) semantics, and (3) make the entire formulation more relevant to the development of a theory of idealized linguistic performance.

The additional intuitions to be accounted for lie mainly in the area of terms referring to step, in-law, and half-sibling relationships. For example, Bock's rules generate the affinal terms 'father-in-law' and 'mother-in-law' completely independently of the corresponding consanguineal terms 'father' and 'mother'. The revised rules make the intuition of a connection between such consanguineal and affinal terms completely non-accidental and explicit. The lexical terms 'brother', 'sister', 'father', 'mother', 'son', and 'daughter' are introduced by means of the same rules every time regardless of the modifying affixes which may occur with them.

Explicit formal recognition is also made of the prelexical nature of the transformational rules which are needed for kinship semantics. The distinction between "generative" (symbol-expansion) and "transformational" operations is represented clearly in the revised notation for the rules themselves. Various types of alternation and extension in the use of kin terms are then explainable as resulting from a perfectly straightforward application of the transformational rules to semantic structures which are not generated by the symbol-expansion rules.

Another result of this transformational semantic approach to the use of kinship terminology is that it enhances the relevance of the analysis for an integrated theory of idealized linguistic performance. Psycholinguistic experimentation (to be performed) indicates (hopefully) that the production of kinship terms is determined (and constrained) more by transformational rules than by "generative" rules, while their comprehension by listeners is more dependent upon the allegedly "generative" rules. These results follow naturally from a revised analytical framework in which such generative rules are stood on their heads to represent processes of lexical interpretation rather than generation.
The complexity of the relationship between linguistic competence and speaking and hearing sentences is made apparent by experiments which show that sentence perception and production are not simple operational analogues of grammatical description. It is demonstrated here that the processes of sentence production also are sensitive to potential perceptual difficulties not revealed by structural descriptions alone.

Sentences (1) and (2) contain the categorically ambiguous word base.

1. The comedian's skit, which was neither stupid nor base, was attacked all night.
2. The comedian's skit, which was neither base nor stupid, was attacked all night.

Gleitman (Ph.D. thesis, MIT, 1970) demonstrated that (1) is harder to recall than (2). He attributed the difference to the separation of the categorically ambiguous word, base, from a context in which the inappropriate category might be used in projecting partial (incorrect) analysis of the string.

Similarly, he predicted that separating words belonging to identical categories would prevent their confusion and aid recall. In sentences like (3) and (4), forgetting which verb goes with which phrase has a disastrous effect on the meaning of the sentence. In fact, such sentences are easier to recall when the two verbs were separated by an adverb as in (3).

3. The man whom the woman watched often kissed the child.
4. The man whom the woman often watched kissed the child.

Differences in performance on such memory tasks do not necessarily arise from memory processes. Unless special procedures are adopted during learning sessions, perceptual difficulties may persist as memory deficits.

The potential misinterpretation of (1) can be avoided by choice of word order. On the other hand, the order of verbs in (3) and (4) has no effect on processing difficulty; consequently, there is no reason to suppose that one or another is preferred. When subjects completed such sentences in which the critical phrases were replaced by a blank and a list of words to be used in filling the blank, they more often changed list order to the "easier" version of (1) and (2) (p < .05, t-test), but they did not favor either order of verbs in (3) and (4). (In a sorting task, yet to be completed, subjects are expected, quite literally, to prefer perceptually easier sentences.)

The structural difficulty of (1) and (2) must be identical; therefore, it seems clear that "complexity" is confined to processing the surface form; i.e. to performance, rather than competence. It seems equally clear that subjects avoided strings which permit the assignment of inappropriate substructures or are difficult to segment structurally in favor of structurally identical, but perceptually easier, arrangements of the same words.
Although stratificational theory has claimed that any linguistic description should be both a model of competence and a model of performance for its language, many stratificational descriptions of linguistic competence have not been usable as models of performance because of certain defects in their notation. This paper describes a revised stratificational notation which will allow every description of linguistic competence to be used as a rigorous transductional algorithm for linguistic performance.

This revised notation differs from the usual stratificational notation in two ways: (1) the realizations described by the network are regarded as logical "if-then" relationships, not as quasi-neurological relationships to be activated by impulses; (2) the relationships within each linguistic level are shown by separate symbols or linguistic elements, rather than by the order in which points in the network are activated.

The paper first demonstrates the proposed transductional algorithm by applying it to a given utterance. The description of that utterance on a certain level is given, and the necessary realization formulas between that level and an adjacent level of the language are also given. The realization of the given description onto the adjacent level is then illustrated.

The paper then demonstrates how the proposed algorithm can deal with certain problems of performance that have not been adequately dealt with by previous kinds of stratificational notation. These problems include: (1) portmanteau realizations which may be the priority realizations of points higher in the network; (2) points in the network which are realized by relationships between points lower in the network; (3) relationships which a tactics imposes on realizations from higher levels.

Example of transduction by means of realization formulas with taxemes.

Data from English:

Description of this text on the graphemic level:

Description of this text on the neighboring, graphemic sign level:

[96]

[97]
Realization formulas from the lower graphemic alternation pattern:

\[ G/A \]

\[ G/C \]

\[ G/I \]

Realization which is conditioned by a following environment:

Data from French:
- dans + la = dans la
- dans + le = dans le
- â + la = à la
- â + le = au

Network with ORDERED AND nodes:

\[ \text{Network with taxemes:} \]

\[ \text{Tactic formula} \]

\[ \text{Realization formulas} \]
Realization of a point in the network by a relationship:

Data from Russian:

p'at' rublej '5 rubles'
rublej p'at' 'approximately 5 rubles'

Network with ORDERED AND nodes:

Network with taxemes:

Stanley F. Warren, International Reading Association

WORD CLASS AND MARKED VS. UNMARKED FEATURES IN COMPREHENSION

The purpose of this paper is to explore the way in which information from the perceiver interacts with information from the text in the perception of language. A series of experimental studies involving written materials was developed to study this topic. These studies showed that two factors had an important effect on various components of the comprehension process. The two factors were the grammatical class of the word being processed and whether higher-order structures were marked or unmarked.

There has been continuing debate about the extent to which the perception of language is an "active" process and the extent to which it is "passive". The experimental studies to be reported here were designed to analyze "comprehension" into components. This was done to see if aspects of comprehension centering on the transmission of stimulus information could reliably be separated from aspects of comprehension centering on the transformation of stimulus information. Transmission of stimulus information entails relatively lesser interaction between information from within the organism and information from the text, and would support the view that comprehension is "passive". Transformation of stimulus information supports the view that comprehension is an "active" process, entailing greater interaction between information within the perceiver and information from the text.

The test materials were presented graphically rather than auditorily so as to minimize the number of variables that had to be controlled. Although these experiments dealt with reading, it seems reasonable that the same kinds of structural factors are involved in the perception of speech, but this assumption remains to be tested.

"Comprehension" was divided into the following components:

(a) Attention: Scanning of the text to pick up information. Allocation of attention to the text was studied by monitoring the reader's eye movements.

(b) Parsing: Dividing the text into perceptual units for processing. This was studied by monitoring eye movements, and by studying the
distance between where the eye is and where the voice is in oral reading.

(c) Memory: Storing information in the text. Ability to recall different kinds of information in the text was studied by asking the subject to judge whether two sequentially presented texts were the same or different.

(d) Predictions: Information from within the perceiver consists of rules about the structure of texts. On the basis of these rules, the perceiver makes predictions about what he will encounter. These rules were studied by having subjects complete sentence frames with various parts deleted. Structures were classified as marked or unmarked on the basis of this procedure. (Each of these four experimental procedures will be demonstrated.)

As noted earlier, the grammatical class of the word being processed and whether higher-order structures were marked or unmarked affected comprehension. Two conclusions follow from the results of these studies:

1. At the various stages of comprehension, even at the level of visually scanning the text to pick up stimulus information, information from within the perceiver affects processing.

2. When there is a conflict between stimulus information and context information, the perceiver rechecks both the context and the particular stimulus item; however, there is far greater rechecking of the stimulus item than of the context. This suggests that comprehension is a process of accommodating new items to an evolving schema and checking their "fit", rather than a process of merely chaining individual meanings.

Rocky V. Miranda, University of Minnesota

HOW DO RULES GET ADDED IN THE MIDDLE OF GRAMMARS?

It is argued in this paper that there is such a thing as rule insertion. Some linguists have been skeptical about it because of the controversial nature of some of the examples, and because it was not made clear how rule insertion comes about. There are many relatively clear cases of rule insertion: (i) Indo-Iranian l → r and θ → ifecycle present the ruki rule which retroflexes an s after f, ñ, ñ, r, etc. (ii) In some German dialects final θ deletion rule is inserted before the final obstructing voicing rule. (iii) In some English dialects aw → aw is inserted before the rule that front velars before front vowels. (iv) In some Finnish dialects γ → φ / e e is inserted before ee → i e. (It is pointed out later on why this is not a case of rule reordering.)

Rule insertion is not really as odd a change as it appears once you observe how it comes about. It is brought about by the same processes of change that bring about rule insertion. Let me show how rule insertion can occur through phonetic change. When a phonetic change occurs that impinges on an earlier compulsory phonetic rule one of the following developments can occur:

(i) It will push up the compulsory rule and get added after it. In that case rule addition will take place.

(ii) It will get superseded by the compulsory rule in which case in the reordering of rules it must take its place prior to the compulsory rule. In that case rule insertion will take place.

It is interesting to note that in the German and Finnish cases mentioned above some dialects have chosen the first alternative and some the second. Rule insertion through phonetic change is therefore as follows: when there is a compulsory rule in the language x → y / z and subsequently a phonetic change w → z occurring wx → sy occurs it is logically indispensable that it insert the rule w → z before x → y / z in an ordered rules format. The phonetic change wx → sy however need not occur segment by segment.
The implications of rule insertion for relative chronology are clear. When we have phonetic changes $x \rightarrow y / z_-$ and $w \rightarrow z$ including $wx \rightarrow zy$ the chronological order of the changes is either

(i) $w \rightarrow z$
(ii) $x \rightarrow y / z_-$

or (i) $x \rightarrow y / z_-$
(ii) $w \rightarrow z$ including $wx \rightarrow zy$.

It is also claimed in this paper that one of the two types of reordering mentioned by Kiparski is non-existent, i.e. rule reordering characterised by a change of non-feeding order into feeding order. Rule reorderings of this type appear to be cases of rule insertion or contingent rule repetition. When in some Finnish dialects eye $\rightarrow$ ee it is odd to expect the rule ee $\rightarrow$ ie to wait patiently for sometime and then assert itself by reordering. It is more reasonable to expect the loss of $\gamma$ to be accompanied by diphongisation.

Anthony J. Naro, University of Chicago and Instituto de Investigação Científica de Angola
SYNTACTIC CHANGE AS A SURFACE PHENOMENON

Syntactic change occurs in such a way as to increase regularity stated in terms of surface structure. On a deeper level such change can result in formal rules which are less general than before the change, producing a more complex grammar. In this respect syntactic change may differ from phonological change, which seems to be understandable in terms of formal rule generalization.

The language learner constructs a grammar in stages of increasingly deep hypotheses. He postulates abstract structures different from surface structures and rules to relate the former to the latter only when forced to do so by the data to be accounted for. Since syntactic data are relatively less frequent than phonological data shallow syntactic hypotheses survive more easily than shallow phonological ones.

Examples are drawn from the syntactic history of English, Portuguese, Latin, Japanese, and other sources.
The purpose of this paper is to examine the historical source and implications of Aux deletions in Modern English questions. If we take the full form of the question to be those utterances generated by fronting the first element of Aux, with DO insertion where Aux is tense only, then the actual questions people ask present a seemingly large and chaotic variety of deletions. For example:

- **BE Deletion**
  - "He sick?"
  - "(You) coming?"
  - "Whatcha doing?"

- **DO Deletion**
  - "How ya put it in?"
  - "(You) know what I mean?"

- **HAVE Deletion**
  - "Where ya been?"
  - "(You) seen him lately?"
  - "Whatcha been doing?"

These forms have in common the deletion of the first element of the Aux, namely, the tense carrier. There are two interesting restrictions: the tense carrier must be other than a Modal and the sentence must not be negative.

The following evidence suggests that the deletion option (which was not present in Shakespearean English) started with Yes-No questions and is now spreading to W-questions: (1) most tense carrier deletions are acceptable rapid Standard for Y-N questions, but W-question deletions are more restricted; (2) Non Standard dialects, such as Black English, have generalized this option so that it occurs widely with W-questions also, demonstrating the spread of the rule; (3) Y-N questions, but not W-questions, have developed a further optional deletion, that of the subject noun phrase 'you'.

This very general option to delete the first, fronted Aux element is significant in view of the history of English. An asymmetry which developed shortly after Shakespeare is being adjusted. Shakespeare had two present tense forms which were apparently equivalent: (A) I hear, and (B) I do hear, where the DO is unstressed. The corresponding interrogative forms were: (A) Hear you? and (B) Do you hear? Unexpectedly,
An important heritage from 19th century philology is the idea that only phonological factors can condition sound-change. Actually, there are instances in which morphological factors also play some role; however, these are distinctly exceptional, and any candidate for such interpretation must be severely scrutinized. With this in mind, I plan to discuss the Greek future. Other similar problems in Greek are less tractable to my analysis, and I do not handle them in detail.

The Greek future is formed as follows: stem + future formant -personal endings. For most verbs, the tense formant was once -σ-, or, for a certain class of stems, -Ve-. Thus, the 1st sing. fut. forms from the typical stems trep-, 1τ-, and bale- were then trep-s-σ, 1τ-s-σ, and *bale-es-σ. The actually attested forms are trepso, 1τso, and baleo. In baleσ, we see the result of two phonological rules, whereby (1) -VeV- changed to -VV-, and then (2) -VV- changed to -VV-. For some reason, though, 1τσ and many other forms managed to contravene these rules.

According to the traditional explanation, the sound-changes took place without exception, but *1τσ or *1τσ subsequently reverted to 1τσ, because of the analogy of unchanged trepσ, etc. According to Kliparsky (Language 1967, 627), 1τσ and its fellows were always exempt from rule (1). Neither explanation tells us why -σ was permanently lost from *baleσ but not from 1τσ.

It is best to steer a middle course between the old and new explanations. At one time, some speakers said 1τσ and *baleσ, and others said *1τσ and *baleho. At that time, children learning Greek generally adopted rule (1); all else being equal, they found intervocalic -h preferable, perhaps because it was easier to pronounce. They also generally analyzed the future formant of trep- and 1τ- as -σσ-, so as to retain the maximum possible regularity in the surface phonetic forms. This analysis was possible, because (a) Greek then had the geminate simplification rules -Csσ- to -Cs-, and -Veσ- to -Ve-, and (b) nearly all vocalic stems in Greek show a long vowel (or diphthong) in the future. Thus, from the child's underlying *trep-σσ-σ and *1τ-σσ-σ the surface

forms would still be trepsos (the only form which he heard from adult speakers) and 1τσ (which he heard from some speakers). There was not, however, any way of keeping the -s- of *baleso, since any surface occurrence of a short vowel before -σ- was at this time incompatible with rule (1).
15. possible development, if sound changes were conditioned only phonologically:
   a. trepsō dōsō lusō philēsō balesō ēsaii genesos
   b. trepsō dōhō lusō philēhō balehō ēsaii genesos
   c. trepsō " " " " balehō ēsaii genesos
   d. " dōsō lusō philēsō " " "
   e. trepsō dōsō lusō philēsō balehō ēsaii genesos
   f. trepsō dōsō lusō philēsō balehō (hēsai) genesos

16. possible development, if sound changes were sometimes morphologically conditioned:
   a. trepsō dōsō lusō philēsō balesō ēsaii genesos
   b. trepsō dōsō lusō philēsō balehō ēsaii genesos
   c. trepsō dōsō lusō philēsō balehō ēsaii genesos
   d. trepsō dōsō lusō philēsō balehō ēsaii genesos
   e. trepsō dōsō lusō philēsō balehō (hēsai) genesos

17. Inscriptional evidence (Attic, etc.) for underlying -ss-, etc.:
   a. ΑΧΣΕΙ (i. e., akhassi) for ᾳςει, which is normally considered to be akssi.
   b. ΕΤΡΑΦΕΝ (i. e., eгraphен) for ἄραφεν, which is normally considered to be eгrapеn.
   c. ΞΕΝΟΣ (i. e., ]хенос) for ξένος, which is normally considered to be ksenos.
Concerning the historical origin of this formation, a great number of frequently controversial theories have been proposed. For reasons of time, this paper cannot discuss all of those theories but will rather narrowly focus on what appears to me the most plausible hypothesis proposed so far and on a possible way of expanding it.

That hypothesis was first proposed by Pedersen (cf. 1926:10-1 with reference to an earlier version). Pedersen correctly observed that there are (at least from the synchronic point of view) two types of UMMY-preterits in Lithuanian. The first type is exemplified by the set pres. laikiai, inf. laikytis, pret. sg. š laikiai, š laikė, pret. pple. laikius-, the second type by peikiau, peiktis, peikiai, peikę, peikus-; that is, the two types differ by the fact that the first has a suffix -ys- = [I] in the infinitive and palatalization (marked by post-consonantal ū) in the preterit participle, while the second has neither of these features. According to Pedersen, this indicates that the two types are historically of different origin, the second being an original real UMY-preterit, while the first was originally a preterit in š-ūs- (with the ū of the infinitive) > š-ūs- > šys- (with perhaps some conditioned different outcomes and in that case subsequent leveling); similarly, the participle developed from š-ūs- via š-ius- š-ius- to šys-. The original difference between the two types of preterits is in his opinion further indicated by the fact that in compound forms with preverbs, the two preterits show an accentual difference: iš-latke vs. š-pelkė.

This view has been accepted in essence also in the most recent handbook on the comparative linguistics of Lithuanian, namely Stang (1966: 382). However, as Stang correctly observed, the accentual argument is not very cogent, since the root-accentuation in forms like iš-latke can be considered to have been taken over from the corresponding presents which also show constant root-accentuation (cf. iš-latko). One might add that also in the other class of verbs, the accentuations of present and preterit are identical, both being of the 'mobile' kind.

Considering that the preterit participle is in origin the perfect...
participle and thus originally not part of the preterit system, even the argument that the two types differ in the presence or absence of *-I-
in that formation cannot be considered necessarily cogent. For it might
be argued that originally, rather than agreeing with the preterit stem,
the perfect participle agreed in structure with the infinitive: *-I-\text{-}ti : 
*-I-\text{-}us- = -\text{-}i-\text{-}ti : -\text{-}i-\text{-}us-.

In that case, it is possible to derive also the type petki (inf. petki-\text{-}ti) from an earlier *-a-preterit. For by and large (with the excep-
tions explainable by analogy), this *-a-preterit corresponds to the 
a-preterit. In addition, where possible, the *-a-preterit of this type
shows lengthened root vocalism, i.e. heavy syllables preceding the suf-
fix. Under the assumption that Sievers-Edgerton's Law continued to
operate until the origin of this preterit, it is possible to postu-
late the following development:

\[
\begin{align*}
pres. *-ja- & : pret. *-ja- (cf. pres. *-a- : pret. *-\text{-}e-) > 
*-ja- & : \text{Sievers-Edgerton's Law} > -\text{-}e- & \text{(spelled e).}
\end{align*}
\]

The difference between the preterit participles would then be due
the fact that thematic formations do not keep their suffix in the
infinitive (cf. petkib : petki-\text{-}ti just like sukib : sukib-\text{-}ti vs. laikib : 
laikib-\text{-}ti) and in the formations agreeing with it in structure, including
the old perfect participle.

This would then lead to the (to my knowledge) novel conclusion that
all Lithuanian preterits (except for *bit\text{-}(i) 'was') can be derived from
an original formation in *-\text{-}a-.

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TRA LA PERDUTA CENIT: FRENCH /\text{-}u/ REVISITED

Few phenomena in the development of French have had so much written
about them as the change of Latin /u/ to /\text{-}u/, although indeed the change
is not coteminar with French. The commonest explanation is that which
traces this development to substratum influence. Pointing out the con-
siderable coincidence of this change with former Celtic speaking areas,
proponents of this hypothesis see the fronting of /u/ to /\text{-}u/ as arising
from pre-Latin pronunciation habits, probably during a period of bi-
lingualism, although some have suggested inherited physiological or
psychological factors permitting emergence of this pronunciation con-
siderably later.

Another common explanation sees fronting of Latin /u/ to /\text{-}u/ as a
result of increased pressure exerted on it by the greater number of back
vowels arising in Western Romance as a consequence of loss of vowel
length. According to this view, four degrees of aperture for back vowels
taxes the articulatory apparatus so that relief is gained by fronting /u/,
permitting /o/ then to rise into the spot vacated, thereby yielding the
more desirable three degrees of back vowel aperture.

It is the thesis of this paper that neither of the above is the case.
Rather, the change in question is quite late, and arises as a transparent
instance of generalization of a phonological rule by simplification, well
into the period of Old French literary documentation. Further, the phono-
logical developments which necessarily precede this change are also not
only late and well documented, but also rest on such 'conditioned' changes
as assimilation.
There is considerable disagreement as to what grammatical features determine the peculiar behavior of the preposition 'a' before Direct Objects in Spanish. It is widely acknowledged that the function of this "accusative a" is that of distinguishing Direct Objects from Subjects. But most rules implicit in traditional analyses (e.g., Bello, 1947), and current in modern textbooks (e.g., Bolinger et al., 1960), are based solely on properties ("humanness", "definiteness") of the head Noun in the Direct Object, ignoring the Subject head Noun.

Appropriate counterexamples demonstrate that these analyses are incorrect. I will show that an adequate account must be based on transformational rules whose structural indices include not only the underlying Object but the Subject as well. I will further show that these rules must be ordered in the transformational cycle. Finally, I will show that an important class of apparent counterexamples springs from an homophonic preposition 'a' which behaves exactly like other prepositions governed by verbs, and quite unlike the accusative 'a' which it superficially resembles.

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LEVELS OF COMPARISON: AN ARGUMENT FOR HIGHER STRUCTURE

It has been argued that ordinary sentences are the complements of 'higher' sentences with performative verbs and that some adverbs come from 'higher' sentences. Here it will be argued that otherwise inexplicable phrases morphologically identical with phrases used in parseable comparisons indicate that there are comparisons being made at a higher level which is similarly involved with hypothetical verbs of saying and thinking and with truth finding.

Ordinary comparison between two structures (involving adjectives, adverbs, and nouns) is constrained as in 2 and 4:

(1) John is [even more stupid ] than he is mean.
(2) *John is stupider than mean.
(3) John is [even more angry] with Mary than she is with him.
(4) *John is angrier with Mary than vice versa.

But sentences 5 (nonsynonymous with 1) and 6 (nonsynonymous with 3) are not so constrained:

(5) John is [*even] more stupid than mean.
(6) John is [*even] more angry with Mary than vice versa.

And 5 and 6 are paraphrases of 7 and 8 respectively:

(7) John is stupid more than mean.
(8) John is angry with Mary more than vice versa [she is with him].

More than, equally, as much as, et al. behave similarly. Hypothesizing a higher level of structure in which such elements express a true comparison involving qualities of statements can best account for them: 9 might be a paraphrase of 5 and 7 and 10 of 6 and 8:

(9) John is more aptly described as stupid than as mean.
(10) [Saying] [that] John is angry with Mary more aptly describes his feeling toward her than [that] Mary is angry with John describes her feeling toward him.

After rather is identified as a comparative and is related to non-temporal soon and lief, a similar distinction in the use of rather than,
as soon as, et al. will be made. It below presupposes that the speaker believes John made a choice; 12 and 14 have no such presupposition; 13 is ambiguous as to such a presupposition; and 15 shows no acceptable choice, unless an avalanche is granted purpose:

(11) John shot Bill rather than get shot by him.  [sooner than]
(12) John shot Bill rather than got shot by him.  [sooner than]
(13) John had coffee rather than tea.
(14) John shot Bill rather than [Bill John vice versa].  [sooner than]
(15) The avalanche killed Bill rather than Harry.

I argue that rather than in sentences like 11 relates two choices which are structurally noun phrases; the surface structure of 16, for example, indicates more obviously the kind of deep structure which underlies both:

(16) John preferred to shoot Bill rather than [to] get shot by him.

I argue further that in sentences like 12, where choice is not so easy to track down, rather than still relates two choices, here those of the speaker, as suggested in 18:

(18) I prefer to make this true statement: John shot Bill rather than [to] make accept this untrue one: John got shot by Bill.

Making these facts fit with facts from other higher sentence analyses gives a more exact idea of the 'higher reach' of syntax; this strong evidence of higher structure should encourage more research on conjunctions, conjunctive and sentence modifiers, and other 'sentential' phenomena; and, in general, developing a hypothetical structure which matches unexplained semantic facts on the one hand to unaccounted-for morphological 'coincidence' on the other is better established as an approach to syntactic research.

Postal has suggested that sentences like the following involve a type of deletion rule:

(1) Sam weighs 150 pounds.
(2) Hanoi has refused to cooperate.
(3) IBM is overpriced, but I bought it anyway.

In these sentences, Sam refers to Sam's body, Hanoi, to the government whose capital is Hanoi, and IBM, to the stock of the IBM Company. Postal would have the surface structure NP's Sam, Hanoi and IBM in the sentences above derived from their underlying semantic representation by a rule which he refers to variously as body-deletion, euphemistic genital deletion, government-deletion, stock-deletion, etc., depending on the semantic material involved. Accepting Postal's analysis, I refer to all such deletions as head deletions, calling the NP's remaining after such deletions beheaded NP's.

When two NP's beheaded by deletions of different underlying structures are coreferential in their position in underlying structure, they often function as coreferential in derived structure with regard to rules like pronominalization, relative clause formation, Equi NP deletion and reflexivization. However, NP's coreferential in their pre-head deletion position do not always behave regularly with respect to these rules, and this paper explores the difficulty of predicting in what cases they do and do not function as coreferential. Many unacceptable sentences with beheaded NP's can more easily be given an alternate interpretation than others, but the question of why some alternate interpretations occur more readily than others and in general when beheaded NP's act as coreferential is difficult and does not seem explainable purely in terms of surface structure facts, what syntactic rules are involved and what underlying material has been deleted.
1. Sam weighs 250 pounds.
2. Hanoi has refused to cooperate.
3. IBM is greatly overpriced.
4. a. Turn up the hi fi.
   b. Turn up the sound of the hi fi.
5. a. I'm parked in a no-parking zone.
   b. My car is parked in a no-parking zone.
6. a. Chomsky is too complicated for freshmen to read.
   b. Chomsky's work is too complicated for freshmen to read.
7. a. This can is contaminated.
   b. The contents of this can are contaminated.
8. Max is playing with himself again.
9. Norman Mailer doesn't mind being read under the influence of drugs.
10. Because Boston is so dirty, it will soon enact a new anti-litter law.
11. a. The campus of the university at Berkeley, whose students took to the streets in a pitched battle with police last spring, will soon be all glass and steel and concrete.
    b. *Berkeley, which took to the streets in a pitched battle with police last spring, will soon be all glass and steel and concrete.
12. a. The government of North Vietnam wants the city of Hanoi to become more spacious.
    b. *Hanoi wants to become more spacious.
13. a. The people whose work is connected with the Stock Exchange threw ticker tape all over Wall Street.
    b. *Wall Street threw ticker tape all over itself.
14. a. All the people who live in the apartment house have hepatitis, and it badly needs a new coat of paint.
    b. *The whole apartment house has hepatitis, and it badly needs a new coat of paint.
15. a. *Norman Mailer is reading himself on a nationwide TV broadcast.
    b. Norman Mailer wants to be read on a nationwide TV broadcast.
    c. Norman Mailer, who is seldom read on nationwide TV, will be reading someone else's work on NBC Sunday.
    d. Did Norman Mailer hear Richard Burton reading him aloud on the BBC?
16. a. *The hospital decided to have itself repainted.
    b. *The hospital wants to be repainted.
    c. The hospital that was completely repainted last week has since reported four cases of patients being poisoned from lead fumes.
    d. *The hospital fired Sam several weeks after it was repainted.
    b. *Wall Street wants to cross Fifth Avenue.
    c. *Yesterday my cab stalled on Wall Street, which seems to be getting panicky.
    d. I drove along Wall Street last Friday afternoon, and I had a hard time realizing that it was in a panic.
18. a. *Monaco realizes that it is charming.
    b. *Monaco boasts that it is charming.
    c. Monaco regrets that it is too small in area to accommodate more millionaires.
19. a. *Right after Kingston sat down at the conference table, it slid into the water.
    b. *The Vatican didn't join in the festivities because it was flooded.
    c. Even if Monaco were larger in area, it wouldn't accept deserters.
20. a. Harry wanted to merge, but the rest of the board voted for continued separation of the two companies.
    b. Harry merged.
21. a. Sally is really a hawk; she even wants to bomb Hanoi.
    b. Sally bombed Hanoi last night.
22. a. Lila voted to disband.
    b. *Lila disbanded.
23. a. Nixon wants to bomb Hanoi.
   b. Nixon tried to bomb Hanoi.
24. a. Mary wants to bomb Hanoi.
   b. Mary tried to bomb Hanoi.
25. a. Nixon decided to bomb Hanoi.
   b. Nixon decided to walk on the moon.
26. a. Dylan Thomas listened to himself being read by Richard Burton for about two minutes, and then he stood up and lumbered out of the theatre.
   b. #Dylan Thomas always liked to read himself aloud to an admiring audience.
   c. *I once heard Dylan Thomas read himself.
27. a. Sam is redecorating the club that refused to take him as a member.
   b. #The church that refused to take Sam as a member stands on the corner of Hollywood and Vire.
   c. #Sam is building a steeple on the church that refused to take him as a member.
28. a. Andy Warhol is worth more on the open market than he was before Valerie Solans shot him.
   b. #Chagall is worth more than Pollock on the open market because he is Jewish.
29. a. The hospital contracted to be rebuilt without glass windows.
   b. #The hospital refused to be rebuilt without glass windows.
   c. #The hospital refused to be painted green.
30. I disagree with Hanoi and I hope we bomb it if we can spare the surrounding countryside.
31. Washington gives me all my grants, but I wouldn't want to live there.
32. a. Homer is difficult to read, isn't he?
   b. Sappho is difficult to read, isn't she?
33. The museum has decided to rid itself of cockroaches.
34. Washington refused to negotiate, didn't he?
35. Homer, who can't read in the original Greek, is still to be found unopened on my bookshelves.
36. Homer, who can't read in the original Greek, was a blind, wandering poet.
37. The United States, who refused to negotiate last July, is now trying to reopen peace talks as quickly as possible.
38. The United States, who is extremely large in area, would no doubt refuse to allow India to colonize Alaska.
39. Sam can read Homer, who does not have a pompous prose style.
40. Evuschenko can read Capote, who does not have a pompous prose style.
41. a. Proust expected most readers to finish reading him.
   b. Proust expected most readers to finish him.
   c. Proust expected most people to finish him.
42. Because Proust was an illustrious homosexual novelist, he takes up a shelf of the Gay Liberation National Library.
43. #Because Genet is a homosexual, he takes up a shelf of the Gay Liberation National Library.
44. #If you keep playing with yourself, you'll fall off.
45. If you keep playing with yourself, you'll go limp forever.
46. *You'll fall off your body.
47. Red-eyed people should conceal them with dark glasses.
48. The best beatmeat comes from young ones.
49. Football players should really own several of them.
50. The best pork comes from young ones.
51. Soccer players should really own several of them.
52. Joe Namath doesn't like football; in fact he doesn't even own one.
53. Rich learned to speak Vietnamese soon after he was sent there.
54. That church is full of cobwebs and dirt, but it preaches against impurities of the soul.
55. The hospital went on a picnic after it was repainted.
56. I'm going to sell mine.
57. Sanskrit will not meet today, but Japanese, which is an equally interesting language, will.
58. a. All those who own IBM stock rejoiced at its high earnings.
   b. IBM rejoiced at its high earnings.
59. Betty is Jewish.
60. Betty is attractive.
61. Betty knows judo.
62. Max thinks he's too small to satisfy Betty.
63. Max thinks he's too poor to satisfy Betty.
64. Max admires Betty, and Betty admires Max.

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UNACCEPTABLE AMBIGUITY

In most dialects of English, sentence (i) is unambiguous:

(i) Jack wants Mike to wash himself, and Arnie to shave him.

and has the same meaning as

(ii) Jack wants Mike to wash himself, and Jack wants Arnie to shave himself.

indicating, as noted in Jackendoff ("Gapping and Related Rules"), that the rule of Gapping must be blocked from applying in

(iii) Jack wants Mike to wash himself, and Arnie wants Mike to shave himself.

since such Gapping would yield (i), but then (i) should be ambiguous between the readings (ii) and (iii), which it is not.

This paper is an attempt to account for the unambiguity of (i) and similar but unrelated cases where ambiguity might be expected but does not occur. It is shown that a restriction on the rule of Gapping, as proposed by Jackendoff, cannot account for other cases of unacceptable ambiguity, and that all such cases can be accounted for only by an extension of the requirement on recoverability of deletions to the effect that certain kinds of deletion may not result in ambiguity. Such a constraint is, of course, transderivational. The implications of this conclusion for linguistic theory, in particular the problem of limiting the class of possible transderivational constraints, are briefly considered.
The passive voice in English is multiply ambiguous in ways that cannot be resolved within the context of Chomskyan syntactic deep structure. That is, the semantic result of the passive construction may be one of Agent Emphasis (These pyramids were built by the Mayas), Agent De-emphasis (This house is cleaned twice a month), or Direct-Object Emphasis (That story has been told too many times). An extension of Fillmore's case grammar analysis provides a hypothesis for resolving this ambiguity, and establishes at the same time an independent motivation for positing the deeper level of case structure in the underlying representation of sentences. An analysis of the Spanish passive voice and of the "reflexive substitute for the passive", in which the latter construction is shown to be neither a reflexive nor a substitute nor a passive, provides real-language support to the hypothesis, e.g. Estas pirámides fueron construidas por los mayas. Se limpia esta casa dos veces al mes, and esa historia ha sido contada demasiadas veces.

1. Estas pirámides fueron construidas hace mil años por los mayas. (These pyramids were built 1000 years ago by the Mayas.)

2. Estas pirámides fueron construidas hace mil años. (These pyramids were built 1000 years ago.)

3. Se construyeron estas pirámides hace mil años. (These pyramids were built 1000 years ago.)

4. These pyramids were built 1000 years ago by the Mayas.

5. [Diagram]

6. [Diagram]
7. ¿Estas pirámides se construyeron hace mil años por los mayas. (These pyramids were built 1000 years ago by the Mayas.)
8. Las pirámides se edificaron por esclavos. (The pyramids were built by slaves.)
9. Estas obras se venden por todos los libreros. 
10. Se rompieron las ventanas por Juan. (The windows were broken by John.)
11. 
```
TIME  V Agentive Objective
    [pass]      
   /       /

hace mil años  construir  los mayas las pirámides
```

16. construir [(Agentive) Objective (Instrumental)]
17. fluir [Objective]
18. El río se fluye.
19. That window was broken by John.
20. This house is cleaned twice a month.
21. That story has been told too many times.
22. The oil should be changed every thousand miles.
23. Studies are begun daily that are greeted with initial enthusiasm only to be forgotten later on.
(1) Estas pirámides fueron construidas hace mil años.
24. (111) These pyramids were built 1000 years ago.
25. (11) Se construyeron estas pirámides hace mil años.
26. 
```
TIME  V Agentive Objective
    [pass]      
   /       /

hace mil años  construir  las pirámides
```

27. Se me olvidaron los libros. (I forgot the books.)
28. The window was broken yesterday.
29. Somebody broke the window yesterday.
30. The window got broken yesterday.

14. El río fluye. (The river flows.)
15. Apparently the same as 13.

[128] [129]
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**CAT-KILLING: ON "by"-PHRASES IN PASSIVE SENTENCES**

In passive sentences, certain superficially similar prepositional phrases are usually interpreted as indicating the direct cause of the action denoted by the verb, e.g. the "by"-phrases of (1), (2), and (3).

1) The cat was killed by George.
2) The cat was killed by arsenic.
3) The cat was killed by poisoning.

It is argued that the prepositional phrases exemplified in (1) and (2), usually termed "Agents" and "Instrumentals", respectively, do not have the same underlying structures. This argument is not new, and is based on facts about co-occurrence in passives (4), co-occurrence limitations in nonpassives (5) and (6), and preposition restrictions (7) and (8), among others.

4) The cat was killed by John with arsenic.
5) John killed the cat with arsenic.
6) *Arsenic killed the cat by John.
7) The cat was killed by *with John.
8) The cat was killed by *with arsenic.

Similar facts of co-occurrence restriction and preposition restrictions are presented to show that the prepositional phrases exemplified in (3) can be neither Agents nor Instrumentals.

4a) *The cat was killed by John with poisoning.
4b) *The cat was killed by arsenic by poisoning.
5a) *Poisoning killed the cat with arsenic.
6a) *Poisoning killed the cat by John.
9) The cat was killed by *poisoning.

It is proposed to term such prepositional phrases "Consequentials" and an underlying source and derivation is proposed. Apparent counter examples, e.g. 10, are presented, and shown to be spurious, by arguments providing further support for the proposed underlying source.

10) The cat was killed by poisoning with arsenic.

It is finally argued that the basic distinction between Consequentials phrases and the more familiar Agent and Instrumental phrases is the derivation of the former from underlying S, i.e. their status as derived nominals as opposed to lexical nominals. It is then seen that the co-occurrence restrictions between Consequentials and Agent and Instrumental phrases in passives require a knowledge of the derivational history of the constituent NPs, supporting the hypothesis that Global Derivational Constraints are necessary to transformational grammar.
Handout

Cat-killing: On "by"-phrases in Passive Sentences

1. The cat was killed by George.
2. The cat was killed by arsenic.
3. The cat was killed by poisoning.
4. The cat was killed by George with arsenic.
5. George killed the cat by arsenic.
6. *Arsenic killed the cat by George.
7. The cat was killed by George.
8. The cat was killed by arsenic.
9. a. The cat was killed by George with arsenic.
    b. The cat was killed with arsenic by George.
10. a. The Pentagon was destroyed absentmindedly by Filbert with a bomb.
    b. The Pentagon was destroyed by Filbert absentmindedly with a bomb.
    c. The Pentagon was destroyed with a bomb by Filbert absentmindedly.
    ......etc......
11. a. *The cat was killed by George with poisoning.
    b. *The cat was killed by arsenic by poisoning.
12. *Poisoning killed the cat with arsenic.
13. *Poisoning killed the cat by George.
14. The cat was killed by poisoning.
15. The war was lost by incompetence.
16. The economy was ruined by mismanagement.
17. The economy was ruined through overexpansion.
18. a.

        S
        |  
     NP | VP  
        |  
       Someone use poison | kill the car

b.

        S
        |  
     NP | VP  
        |  
       NEG someone be competent | lose the war

c.

        S
        |  
     NP | VP  
        |  
       The economy overexpand | ruin the economy

15. The cat was killed by poisoning with arsenic.
16. The cat was killed by hanging by the neck.
17. The war was lost by incompetence with artillery.
18. a. See 11b above.
    b. *The cat was killed by the neck by hanging.
    c. *The war was lost by artillery by incompetence.
23. a. *(by hanging) [by the neck]*
   prep p prep p prep p prep p
b. *(by poisoning) [with arsenic]*
   prep p prep p prep p prep p
c. *(by incompetence) [with artillery]*
   prep p prep p prep p prep p
24. a. *(by [hanging [by the neck]])*
   prep p NP prep p prep p NP prep p
b. *(by [poisoning [with arsenic]])*
   prep p NP prep p prep p NP prep p
c. *(by [incompetence [with artillery]])*
   prep p NP prep p prep p NP prep p
25. The war was lost by Westmoreland by incompetence.
26. The economy war ruined by Nixon by mismanagement.
27. The glass was broken by Caruso by his singing.
28. a. *(by incompetence) [by Westmoreland] = [by Westmoreland]*
   prep p prep p prep p prep p prep p
   *(by incompetence)*
   prep p prep p
b. *(by mismanagement) [by Nixon] = [by Nixon]*
   prep p prep p prep p prep p prep p prep p
   *(by mismanagement)*
   prep p prep p
c. *(by his singing) [by Caruso] = [by Caruso]*
   prep p prep p prep p prep p prep p
   *(by his singing)*
   prep p prep p
29. a. *(by [incompetence by Westmoreland]*)
   prep p NP
   by Westmoreland's incompetence
b. *(by [mismanagement by Nixon]*)
   prep p NP
   by Nixon mismanagement
c. *(his) singing by Caruso*
   prep p NP
   by Caruso's singing

Gerald A. Sanders, University of Minnesota
SOME EVIDENCE FOR THE HYPOTHESIS OF SIMPLEX-FEATURE REPRESENTATION

This paper will be concerned with the distinguishing implications and relative values of the simplex-feature hypothesis, which requires the representation of all linguistic objects by strings of minimal independently-interpretable elements such as (NASAL, HUMAN, VERBAL, θ, ...) and the alternative hypothesis of complex-feature representation, which permits linguistic representations to include complex two-element minimal constructions such as [+Nasal], [-Human], [Verbal], etc. It will be shown that when these two representations are explicitly formulated and compared, the simplex-feature hypothesis is found to have consistently greater explanatory value than its less restricted complex-feature alternative.

Specific evidence will be presented to show that the simplex-feature hypothesis not only permits the distinct representation of distinct objects by means of a smaller vocabulary of theoretical terms and a simpler system of empirical interpretation, but also determines a much more restricted class of possible grammatical rules and possible languages than can be determined by the complex-feature hypothesis. It will be suggested that these restrictions are consistent with the known facts about natural language, and hence that the simplex-feature hypothesis is a necessary principle of natural language grammar.

An example of the type of confirming evidence that will be discussed concerns the fact that there are languages in which all word-final true consonants are voiceless (e.g., German, Thai), but none in which all final consonants are voiced. This fact can be explained only by theories that determine possible phonological rules that devote final voiced consonants but no rules that voice final voiceless consonants. Theories that permit complex-feature representation are inherently incapable of providing any principled differentiation of these two rule-types, however, since there is no general principle from which it would follow that a rule like ([+Cons] - [-Voiced]/θ) is a possible rule while ([+Cons] - [-Voiced]/θ) is not. For theories that incorporate the simplex-feature hypothesis, on the other hand, the natural rule of final devoicing would
necessarily have to be expressed as an element deletion transformation, (VOICED - $\emptyset/[(\text{CONS}_{-})\emptyset]$), while the unnatural rule of final voicing would necessarily have to be expressed as an element adjunction transformation, ($\emptyset$ - VOICED/[(CONS$_{-})\emptyset$]). The possibility of the former rule and the impossibility of the latter would then follow naturally from the general principle that elements which are equivalent to null are universally addeable but not deletable in constituent-initial position and deletable but not addeable in constituent-final position. This principle is independently motivated with respect to a wide range of other facts about prothesis, apocope, and the differences between the initial and final distributions of spirants, aspirates, and nasals in various languages, and it is thus capable of serving in simplex-feature theories as an otherwise unavailable explanation of the given facts about final devoicing.

Similar evidence of the greater restrictive and explanatory powers of the simplex-feature hypothesis will be presented with respect to facts about reflexivization, superficial subjecthood precedence, nasal assimilation and vowel-contraction processes, and the quality relations between the apocopated and unassimilated prothetic and epenthetic vowels of particular languages.

David W. McAlpin, University of Wisconsin, Madison

TRINARY FEATURES IN GENERATIVE PHONOLOGY

Within the basic framework provided by Chomsky and Halle in Part IV (especially chap. 9 on markedness) of the Sound Pattern of English, this paper will argue that the forcing of binary features into the deeper levels of phonology leads to a distortion and complication which can be avoided if trinary features are allowed at the deepest levels of the grammar. The C-H theory is interpreted as allowing deep level marked-unmarked phonological features in which the marked features may be $\Box$ (general marked) or $\pm$ or $\Box$. These marked-unmarked rules are converted by a largely universal set of rules into a system of features marked exclusively plus or minus. Later rules can further convert these to an n-nary stage on the phonetic level. This paper will argue that a better phonology is derived with a marked-unmarked system (where marked may be $\pm_3$, $\pm_{-2}$, or $\pm_0$) which is converted by a set of explicit rules into a trinary ($*, 0, -$) system which is later converted to an n-nary phonetic system and that this can be done with no loss of formality. This modification results in alteration of some features; paired features (high-low, front-back) are reduced to one three-valued feature. Some features (round, tense, length, voice) gain in descriptive power with three values; others (lateral, nasal, all major class features) are inherently binary (marked $\pm$ or $\Box$). The $\Box$ value is particularly useful in defining the neutral position. This theory is based on and demonstrated by the phonology of Malayalam which has six consonantal positions with contrasting stops and nasals, and extensive fricatives and liquids.
TABLE A  Trinary Features with SPE Binary Equivalents

<table>
<thead>
<tr>
<th>Feature</th>
<th>+ High</th>
<th>-Low</th>
<th>+ Back</th>
<th>-Anterior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labials</td>
<td>+</td>
<td>0</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td>Dentals</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Alveolars</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Retroflexes</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Palato-alveolars</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Velars</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
</tr>
</tbody>
</table>

* except that alveolars are 0 back instead of + anterior, and back is restricted to the oral cavity.

TABLE B  lab ret cor high back

<table>
<thead>
<tr>
<th>Feature</th>
<th>lab</th>
<th>ret</th>
<th>cor</th>
<th>high</th>
<th>back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labials</td>
<td>+</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>a</td>
</tr>
<tr>
<td>Dentals</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>a</td>
</tr>
<tr>
<td>Alveolars</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>a</td>
</tr>
<tr>
<td>Retroflexes</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>a</td>
</tr>
<tr>
<td>Palato-alveolars</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>a</td>
</tr>
<tr>
<td>Velars</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>a</td>
</tr>
</tbody>
</table>

α = variable with environment

+ labial–labial closure sufficient to cause friction
0 labial–no such closure

+ retroflex–apex of tongue decidedly turned back
0 retroflex–apex position normal
(+ retroflex) -> (+ coronal)

TABLE C  Trinary Features with no Simple Equivalents

<table>
<thead>
<tr>
<th>Feature</th>
<th>+ Length</th>
<th>- Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>Geminates and long vowels</td>
<td>Normal segments, trills</td>
</tr>
<tr>
<td>Tense</td>
<td>Tense</td>
<td>Lax</td>
</tr>
<tr>
<td>Voice</td>
<td>Voicing of voiced obstruents</td>
<td>Voicing of voiceless</td>
</tr>
</tbody>
</table>

TABLE D  Variables

<table>
<thead>
<tr>
<th>Interpretation</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>+α</td>
<td>A F₁ → B F₂ (/-) B F₂</td>
</tr>
<tr>
<td>0</td>
<td>A F₀ → B F₁ (/+) B F₁</td>
</tr>
<tr>
<td>[0, -]</td>
<td>Where A is a nonvariable, B is a variable, and B F₁ has a trinary interpretation is not allowed.</td>
</tr>
</tbody>
</table>

TABLE E  Markedness Conventions

I. Using a rule of the form

\([u \text{ feat}] \rightarrow [+ \text{ feat}] \text{ // } \alpha\)

\([0 \text{ feat}] \rightarrow [0 \text{ feat}] \text{ // } \beta\)

\([- \text{ feat}] \rightarrow [0 \text{ feat}] \text{ // } \gamma\)

implies the cooccurrence of a rule of the form

\([m \text{ feat}] \rightarrow [+ \text{ feat}] \text{ // } \alpha\)

\([0 \text{ feat}] \rightarrow [+ \text{ feat}] \text{ // } \beta\)

\([- \text{ feat}] \rightarrow [0 \text{ feat}] \text{ // } \gamma\)

II. Whereas using a rule of the form

\([m \text{ feat}] \rightarrow [0 \text{ feat}] \text{ // } \alpha\)

\([0 \text{ feat}] \rightarrow [0 \text{ feat}] \text{ // } \beta\)

\([- \text{ feat}] \rightarrow [0 \text{ feat}] \text{ // } \gamma\)

implies the cooccurrence of a rule of the form

\([u \text{ feat}] \rightarrow [0 \text{ feat}] \text{ // } \alpha\)

\([- \text{ feat}] \rightarrow [0 \text{ feat}] \text{ // } \beta\)

\([0 \text{ feat}] \rightarrow [0 \text{ feat}] \text{ // } \gamma\)

It is to be understood that version II cannot be used for binary features unless \([u \text{ feat}] \rightarrow [+ \text{ feat}] \text{ // } \beta\).

EXAMPLE RULES

1. \([- \text{ back}] \rightarrow [0 \text{ back}] \text{ // } [- \text{ cons}]\)

2. \([0 \text{ back}] \rightarrow [-\text{back}] \text{ // } [+ \text{ lat} \text{ retro}]\)

3. \([- \text{ high}] \rightarrow [0 \text{ high}] \text{ // } [+ \text{ cons} \text{ vol} \text{ + voc}]\)
Background for rules 4-6: all geminate consonants and long vowels are [+ length], all strident fricatives are [+ tensed], (Sanskritic) aspirate stops are [+ hsgp], (Sanskritic) voiced stops are [+ voice].

Note: The marked-unmarked rules are used as a format. No claims are made for these rules necessarily being universal.

4a. [u length] → 

4b. [m length] → 

5a. [u tense] → 

5b. [m tense] → 

6a. [u voice] → 

6b. [m voice] → 

This paper has two purposes: 1) to point out inadequacies in the phonological feature system proposed by Chomsky and Halle in the Sound Pattern of English, and 2) to suggest solutions to these inadequacies.

The inadequacies are in unattained natural classes and unattained underlying contrasts. An example which demonstrates the inability of the proposed feature system to account for some very common natural classes involves labials. In many languages vowels are rounded in the environment of labial consonants, e.g. Gudjberi Mayan a > o / labial (p, b', m). In many languages round vowels and glides are interchanged with labial consonants in certain rules, e.g. w > v in several Germanic, Indo-European, Uto-Aztecan, Mayan languages, etc.; Finnish u > y / v, Spanish b > y / c (e.g. ciudad > ciudad, bautismo > bautismo “city” and “baptism” respectively); etc. These are natural rules (of which many examples will be presented), but there is nothing in the feature system to explain why [+ anterior, -coronal] consonants should cause [+round] vowels, or why [+round] vowels and glides should become [+ anterior, -coronal] consonants. Thus the class which involves labial consonants and round vowels and glides is unattained in the proposed system. There are several other such unattained natural classes.

One example of an unattained underlying contrast involves velars and palatalized velars. Velars are [+ high, -back], and palatalization is represented by [+ high]. Therefore, it is impossible to specify a palatalized velar, since velars are inherently [+ high]. (Consonants specified as [+ high, -back] cannot be palatalized velars, for they are true velars.) Another example of a contrast not provided for by the proposed feature system involves [+ back, -round] vowels. Feife and Hwve are languages reported to have an underlying contrast between ə (high unrounded central), and ə (high unrounded back vowel), and between ɔ (mid unrounded central vowel) and ɔ (mid unrounded back vowel). In the feature system these are all categorically [+ back] vowels, and hence the contrast is unattained. (It should be noted that scalar values could
designate degrees of backness, but scales are to be restricted to a phonetic function, not to the specification of underlying contrasts.)

Two possibilities are available for revising the feature system to account for natural classes and contrasts not attained. The first is to add new features, such as labiality. In such an alternative, round vowels would be in a natural class with labial consonants because both would be [+labial]. Round vowels would also be in a class with labialized consonants (a class needed in the rules of many languages) since both would be [+round]. Unfortunately, any increase in the number of features, however well motivated, automatically produces greater numbers of intersecting and cross-classifying classes. It is desirable to avoid increasing the number of distinctive features available if possible.

The second alternative is to introduce the "complex symbol" in phonology whereby all primary points and manners of articulation are specified by the features of the existing system, but secondary manners of articulation are specified by features of a second matrix associated with the matrix of the primary manners and points of articulations, and representing the independent and only partially simultaneous articulatory gestures of the secondary manners of articulations such as palatalization, labialization, etc. This alternative allows for all the contrasts and natural classes previously unattained without the undesirability of added new features which function rarely but are needed to attain classes and contrasts not now attained. The concept of this "complex symbol" will be described, defended, and illustrated.

Daniel A. Dinnen, University of Texas at Austin.

CONSTRAINTS ON DERIVATIONAL HISTORY IN PHONOLOGY

Evidence has been advanced recently in favor of incorporating a generalized version of derivational history into phonological theory. The innovation of this theoretical device constitutes a significant departure from current theory and vastly increases the range of possible formal grammatical relationships. However, any theory that incorporates the generalized version of derivational history characterizes a wider range of relationships than need be ascribed to natural language. It will be shown in this paper that the evidence motivating derivational history is characteristically restricted to insertion and deletion phenomena. The restricted nature of this evidence permits a highly constrained version of derivational history which derives as a natural consequence of the 'null segment hypothesis'. This hypothesis does require the selection of a derivational marker, i.e. the 'null segment'. However, the null segment hypothesis obtains as a logical extension of current theory and narrowly defines the set of all and only those processes that can introduce the marker into a string. The role of this hypothesis is shown further to have implications for representing certain information in lexical items and for stating conditions on historical change.
IV. Evidence for derivational history from Klamath as reported by Kissberth in his recent unpublished paper, "A Global Rule in Klamath Phonology."

Reduplication (R) The distributive form of the verb is obtained by reduplicating the initial consonant (cluster) of the stem and making a short copy of the first stem vowel after the reduplicated consonant(s).

Vowel Copy (VC) The critical part of the rule makes a short copy of the stem vowel in certain prefixes [including those derived from (R)] and deletes the stem vowel if short.

n-deletion (n/Ø) Morpheme-final n is deleted in the environment C_v.

Vocalization (VOC) Glottalized and plain semi-vowels are vocalized (with glottalization neutralized) in the environment C(S) [ ]. The optional semi-vowel (S) has the effect of vocalizing the second of two contiguous semi-vowels.

a-replacement (a-replc) Replacive a is inserted in the environment before a consonant cluster provided that a stem vowel occurred before that cluster prior to the application of (VC).

Kisseberth demonstrates (1) that (VC) and (a-replc) must be separate rules, (2) that one or more rules are ordered between (VC) and (a-replc), and (3) that (a-replc) requires access to derivational history, i.e., the input to (VC).

Sample derivations

1. (n/Ø) must follow (VC):
   
   /snV*-ken-a/          
   (R)                --------
   (VC) sne-k  n-a
   (n/Ø) sne-k  -a
   (VOC)              --------
   (a-replc)          --------

   output: [sneka] morphophonemic alternate: [kena]
   but not: *[snekena], *[sneka]
2. (VOC) must follow (n/\)):  
\(/s\text{win-a}/+p \)  
(R)  
sw\text{v}*-sw\text{in-a}  
(vc)  
sw\text{i}-sw\text{n-a}  
n/\(  
sw\text{i}-sw\text{-a}  
(VOC)  
----------  
(a-replc)  
----------  
output: [sw\text{i}\text{swa}] morphophonemic alternate: [sw\text{i}\text{na}]  
but not: *[sw\text{i}\text{so}\text{na}]  

3. (a-replc) must be separate from (vc) and must follow (voc):  
\(/s\text{w}\text{g-a}/+p \)  
(R)  
sv\text{v}*-sw\text{g-a}  
(vc)  
si-s w\text{g-a}  
n/\(  
si-s \text{g-a}  
(VOC)  
----------  
(a-replc)  
----------  
output: [s\text{i}\text{s}\text{o}\text{g-a}] morphophonemic alternations: [s\text{i}\text{w}\text{g-a}], [hi\text{s}\text{o}\text{g-a}]  
but not: *[s\text{i}\text{saw}\text{g-a}]  

4. (a-replc) requires derivational history:  
\(/s\text{v}*-\text{ltq-a}/ \)  
(R)  
----------  
(vc)  
so-\text{lt q-a}  
n/\(  
----------  
(VOC)  
----------  
(a-replc)  
----------  
Note: (a-replc) does not apply since a consonant cluster does not follow the slot from which the stem vowel was deleted.  
output: [s\text{o}\text{lta}\text{qa}] morphophonemic alternate: [\text{ltq-a}]  
but not: *[s\text{o}\text{latqa}], *[s\text{o}\text{ta}\text{qa}]  

\(/s\text{v}*-\text{sip}\text{g-a}/ \)  
(R')  
----------  
(vc)  
si-s \text{p-g-a}  
n/\(  
----------  
(VOC)  
----------  
(a-replc)  
si-sap\text{g-a}  
output: [s\text{i}\text{s}\text{p}\text{g-a}] morphophonemic alternate: [\text{sip-g-a}]  
but not: *[s\text{i}\text{sp}\text{g-a}]  

[147]
5. Miscellaneous:

/wayne-tk/\p
wv*-wenwty-tk
we-w mwy-tk
----------
we-w nwi-tk
we-wanwi-tk

Output: [wewanwitk] morphophonemic alternations: [wenwitk], [wen:ya]
but not: *[wenoytk]

IV. Implications of the null segment hypothesis for lexical representations

Kisseberth introduces ad hoc the symbol v* in certain prefixes (1) to trigger the vowel copy rule and (2) to designate the position in the prefix where the copied vowel is to appear.

sv* - causative prefix with short copy following p.

hv* - causative prefix with short copy between h and s.

sv* - reflexive prefix with short copy following s.

s - transitive prefix with no copied vowel.

James E. Hoard, University of British Columbia
Clarence Sloat, University of Oregon

THE INTEGRATION OF MARKEDNESS INTO PHONOLOGY

Incorporating markedness considerations into phonology directly yields a more explanatory system. As has been suggested by Chomsky and Halle in FSP, lexical entries are over markedness values. In addition, the set of morphological rules, which specify symbolic processes and basic allomorphs of affixes, are also over markedness values. The set of strictly phonological rules, those which make no use of syntactic or semantic features, are to be divided into two groups. One of these two groups of rules is written over markedness values; the other group is over phonetic values. These two groups of rules can be distinguished in a principled way. The rules written over phonetic values are essentially the assimilatory processes; the other group comprises the context free processes.

The evidence in favor of incorporating markedness into morphological rules includes ablaut and umlaut in English and historical developments in Sanskrit, Germanic, English, and in Northwest Indian languages. Further evidence is provided by the naturalness of affixal allomorphs with respect to markedness.

The group of F-rules which requires markedness formulation includes the English vowel shift rule and the vowel contraction rules of Nootka and Swahili. An explanatory account of these processes cannot be formulated over phonetic values augmented by 'linking' rules. F-rules that must be formulated over phonetic values include both the progressive and intervocalic voicing rules of English and the Coeur d'Alene vowel assimilation rule. The fact that F-rules divide themselves into two groups leads us to the view that the rules over markedness values have a psychological basis, whereas those over phonetic values have a physical basis.

Markedness can also be brought to bear on the problem of characterizing productive and unproductive processes. Those rules which are unproductive can be considered marked; productive rules can be considered unmarked. A typical case is the English plural which manifests several unproductive basic allomorphs and one productive basic allomorph.
alternative basic allomorphs for the same morpheme only one is ordinarily chosen. These observations allow a principled empirically based theory of irregularity, unlike the formal system of Chomsky and Halle (extended by Lakoff), which fails to distinguish satisfactorily productive from unproductive processes.

Paul Kiparsky, Massachusetts Institute of Technology
"ELSEWHERE" IN PHONOLOGY

This paper argues that disjunctive ordering holds between phonological rules of the form:

(1) A → B / P __ Q
(2) C → D / R __ S

if the context PAQ is a subset of RQS. I term this the elsewhere convention. Chomsky's and Halle's observation that disjunctive ordering holds between rules that can be collapsed with parentheses or angled brackets is essentially the special case where B = D. The idea of generalizing their convention was first proposed by Stephen Anderson.

The supporting evidence is of two sorts:

(A) The elsewhere convention enables us to express linguistic regularities which cannot be expressed in the present theory. For example, consonant assimilation and deletion processes are often disjunctively related (examples 2 and 3 on the handout). In Slavic, the "circumflex" rule must be disjunctive with respect to the other accent assignment rules (example 4).

(B) Phonological derivations conforming to the elsewhere convention (but not to the present theory of phonology) are required by metrical evidence in Vedic Sanskrit (example 5).

In conclusion, the paper discusses the possibility of extending the convention still further so as to require disjunctive ordering between rules (1) and (2) if P __ Q is a subset of R __ S. Example 6, from Sanskrit external Sandhi, provides evidence for this generalization.
(1) **Middle English** (Anderson, 1969)

\[ V^+ [+\text{long}] / CV \]
\[ V^- [-\text{hi}] / _{-\text{CV}} \]

- sun ~ sönes
- wēk ~ wēkes
- Åvel ~ Åveles
- sekēr ~ sikērli
- sömer ~ sumerers

(2) **Western Finnish**

\[ k \quad \text{(or h)} \rightarrow \begin{cases} C_1 / \delta C_1 \\ \emptyset / \# \text{pause} \end{cases} \]

(3) **Diola-Pogny (Sapir)**

"Consonant reduction is achieved by eliding the first of two adjacent consonants. If the first consonant is nasal, it assimilates where possible without eliding."

Examples:

- **a.** ni+gam+gam > nīgargam
- **b.** na+in+m+n+in > nāi+m+n+in
- **c.** takun+habi... > takumi...
- **d.** na+laj+laj > nālalaj

\[ V^+ [+\text{long}] / CV \]
\[ V^- [-\text{hi}] / _{-\text{CV}} \]

- "I judge"
- "you (pl) will know"
- "they sent"
- "he cut (it) through"
- "he cut (with a knife)"
- "he must not..."
- "he returned"
- "he tires"
- "he cultivated for me"

- **e.** tē+i+j+jaw > tēk+j+j+jaw
- "they won't go"
- "it is light"
- "he knows"
- "they carried the food"
- "death there"
- "finish now"
- "he pushed back the children"
- "he stopped there"

**Solution A**

1. **Assimilation**

\[ C \quad -[\text{coda}] \quad / \quad + \]
\[ +[\text{nas}] \quad / \quad \emptyset \]
\[ ([\text{obs}] \quad (a)) \quad ([\text{coda}] \quad (b)) \]

2. **Deletion**

\[ C \quad -[\text{coda}] \quad / \quad \emptyset \quad / \quad + \]
\[ +[\text{obs}] \quad / \quad \emptyset \quad (\text{pause}) \quad (a) \]
\[ +[\text{coda}] \quad / \quad CC \quad (b) \]
\[ C \quad -[\text{coda}] \quad / \quad \emptyset \quad / \quad + \quad (\#) C \quad (c) \]

**Solution B** (conjunctive ordering)

1. **Deletion** (as in solution A)

2. **Assimilation**

\[ C \quad +[\text{coda}] \quad / \quad -[\text{coda}] \quad (\emptyset) C \]
- saitc "be dirty"
- -et "negative suffix"
- na+aj+maj+j- (Del. c) - na+aj+maj+j- (Del. d) na+aj+maj+j-

**Solution C** (disjunctive ordering by elsewhere convention)

1. **Assimilation** (as in solution A)

2. **Deletion**

\[ C \quad \emptyset \quad / \quad + \quad (\#) C \quad CC \]

[152]

[153]
Slavic (Halle)

Various rules accenting stems and endings
Circumflex rule: any word which has not been accented by
the previous rules gets an initial accent.

V - [+acc] /  ₀  C₀  X  ₀
X contains no  V + acc

Rigvedic meter

Surface distribution of glides and vowels:


V,V

V  V

V  C₁,V

(0)  V

Solution A (conjunctive)

/ūci+i+ āṣac+i+ āyug+dhwam ājus+adhwam/

[shī] - [+syl]  /ūci+i+ āṣac+i+ āyug+dhwam ājus+adhwam/

[shī] - [-syl]  /ūci+i+ āṣac+i+ āyug+dhwam ājus+adhwam/

Solution B (conjunctive)

/ūci+i+ āṣac+i+ āyug+dhwam ājus+adhwam/

Solution C (disjunctive by elsewhere convention)

/ūci+i+ āṣac+i+ āyug+dhwam ājus+adhwam/

Sanskrit external sandhi

A. [+cor] - [α pos] / -φ


C. (conjunctive)

/φ 

C.¹ (conjunctive)

/φ

C. (disjunctive by generalized elsewhere convention)

t t t - t t t  t

t c c - c c c

s t t - s t t

s c c - s c c

t p = t p p

t q = t q q

s p p = s p p or h p p

s k k - s k k or h k k

s t t - s t t or h t t

s q q - s q q or h q q

s - h
Christina E. Paulston, University of Pittsburgh

LANGUAGE UNIVERSALS AND SOCIO-CULTURAL IMPLICATIONS IN DEVIAN'T USAGE: PERSONAL QUESTIONS IN SWEDISH

This paper investigates the address avoidance of second person personal pronouns in Swedish in terms of language universals and the relationship between deviation from a universal linguistic feature and social structural change. The hypothesis proposed is that if a language universal exists, and if a language possesses this universal language feature but under specific conditions systematically avoids this feature with circumscriptions, then this particular language usage contains clues to the socio-cultural-economic conditions in that social structure.

The language universal examined is Hockett's "Among the deictic elements of every human language is one that denotes the speaker and one that denotes the addressee" to which I have added "In questions which elicit a response about the addressee's opinion, want, feeling, or experience, there is a tendency to formally denote the addressee." Eleven ways of expressing "What do you want?" in Swedish, only two of which denote the addressee, are examined and the contextual conditions which tend to elicit the various forms are discussed. The assumption given to account for this address avoidance is that it reflects a stage of development from the non-reciprocal power semantic to the solidarity semantic in the terms of the Brown and Gilman study "Pronouns of Power and Solidarity"; that it reflects the dichotomy between a still highly stratified community in terms of social class and the social democratic ideology of equality which has been the dominant political ideology since 1932. As a corollary it is suggested that if there is a casual relationship between social egalitarian ideology and address avoidance of pronouns of address, and if social-democratic ideology continues to influence Swedish social structure, this will be reflected in language customs in an increased use of du. Evidence based on informants' language behavior to support these assumptions is presented.
HANDOUT

Language Universals and Socio-Cultural Implications in Deviant Usage: Personal Questions in Swedish

Below are listed 11 different ways of expressing what do you want? in Swedish:

1. Vad vill du ha?
2. Vad vill ni ha?
3. Vad vill han (-bon) ha?
4. Vad vill Christina (-Fru Paulston-Professor Paulston) ha?
5. Vad vill fröken ha?
6. Vad vill professorn ha?
7. Vad vill man ha?
8. Vad vill vi ha?
9. Vad får det vara?
10. Vad behagas (det)?
11. Vad skulle det vara för någonting?

Ronald R. Butters, Duke University
BLACK ENGLISH [-Z]: SOME THEORETICAL IMPLICATIONS

A number of recent studies have discussed the subtle grammatical differences which exist within groups which speak essentially the same dialect. Two main methods have been employed. The procedure of Elliott, Legum, and Thompson (1969) and of Carden (1971) has been to classify informants by subtype; e.g. Carden divides his informants into five different categories, according to their judgments about the grammaticalness of several English sentences. The method of Labov (1969) and Fasold (1971) is essentially to treat the group as homogeneous, expressing variability as quantificational indices on optional grammatical rules.

This paper argues that, in general, the former method is superior, and that the failure of quantificational indices to take note of subtypes can lead to erroneous conclusions. For example, Fasold asserts (1971:360) that 'the absence of the Z suffixes is a syntactic phenomenon' in Black English. Dividing up the informants shows, however, that while Fasold's assertion may be true of some suffixes for some Black English speakers, it is equally untrue of others.
The purpose of this paper is to present data from Jamaican Creole as empirical evidence against an assumption upon which much of the generatively-oriented work in sociolinguistics is based: that a grammar describing the language of a speech community is necessarily the optimum grammar of the competences of the individuals of that community.

The behavior of two informants with regard to English /h/ comprises the data. Relevant forms are presented and analyzed, first in a standard generative partial phonology for each informant, and then in a community grammar based on data from both informants. The analyses are contrasted: it is pointed out, first, that the informants seem to have different rules generating their surface forms, although these surface forms differ minimally from one informant to the other. It is also pointed out that the community grammar is different from either of the two individual grammars, and, while it reflects the fact that the informants' surface forms are nearly identical, it obscures the differences in individual behavior. All of which suggests that, just as the goals of sociolinguistics and generative theory are not identical, neither should we expect community grammars to be identical with competence grammars.

A. Jennifer
1. Data

<table>
<thead>
<tr>
<th>AE</th>
<th>Formal</th>
<th>Informal</th>
</tr>
</thead>
<tbody>
<tr>
<td>hole</td>
<td>?uol</td>
<td>uol</td>
</tr>
<tr>
<td>happy</td>
<td>?api</td>
<td>api</td>
</tr>
<tr>
<td>hear</td>
<td>?iër</td>
<td>iō</td>
</tr>
<tr>
<td>open</td>
<td>uopn</td>
<td>uopn</td>
</tr>
<tr>
<td>asleep</td>
<td>aslip</td>
<td>aslip</td>
</tr>
<tr>
<td>Angela</td>
<td>a^n jcln</td>
<td>a^n jcln</td>
</tr>
</tbody>
</table>

2. Analysis

Underlying forms: happy /?api/ hole /?iër/ open /uopn/ asleep /aslip/

Rule D:

\[ \phi \rightarrow \phi / \text{Form} + \text{Inf} \]

Derivations:

<table>
<thead>
<tr>
<th>Form.</th>
<th>Inf.</th>
</tr>
</thead>
<tbody>
<tr>
<td>hole</td>
<td>?ol</td>
</tr>
<tr>
<td>Rule D:</td>
<td>-</td>
</tr>
<tr>
<td>Others:</td>
<td>?uol</td>
</tr>
<tr>
<td>open</td>
<td>For.</td>
</tr>
<tr>
<td>U.F.</td>
<td>-</td>
</tr>
<tr>
<td>Rule D:</td>
<td>-</td>
</tr>
<tr>
<td>Others:</td>
<td>uopn</td>
</tr>
</tbody>
</table>
The recent claim that the gradual view of phonological change is untenable is controverted by examples from dialect geography where X and Y differ along continuous articulatory dimensions: e.g. Slavic devoicing, realignment of Netherlandic long vowel systems and diphthong adjustments rules in Southern Swedish and West Frisian dialects. Graduality is fundamental to rule ordering in such changes. Diachronic correspondences are abrupt, but the transmission of phonetic change and change itself are not exclusively abrupt. Spatial, temporal and phonetic graduality are basic principles of dialectology in the diffusion of change. In this paper non-discreteness in temporal and areal patterns and discontinuous transmission are shown to be observationally irreconcilable in dialect geography.

The notion of simplification, generalization by analogy or loss of constraints in rule application, has been introduced in recent discussions of the typology of phonological change. Simplification is here defined as greater generality in rule application and is cited as a primary factor in the transmission of change. Gradual change (drift) and simplification (also reordering) have been typified by some generative phonologists as invoking "abnormal" sound change vs. "normal" sound change invoked by rule addition. This distinction is shown to be purely ad hoc. Generality resulting from simplification is demonstrably a major factor in the diffusion of change from expansive innovation areas, but the further claim has been made that rules are never narrowed in scope in borrowing. This further claim conflicts with generality gradients, formulated as a fundamental principle of dialectology: changes decrease in intensity along the periphery of expansion centers. Adherence to this claim has led generative phonologists to conclusions unsupported by empirical fact; e.g. the High German consonant shift was initiated in the north and gradually generalized in the south.

In this paper evidence from dialectology is advanced to refute the non-gradual and non-narrowing claims, generality (simplification) is
realized as typical of expansion centers and it is shown that reversal of the course of expansion reveals the course of change.

 peripheral area A
 gradual acceptance
 [-general, +narrow]

 expansion center A'
 gradual change
 generality = simplification
 [+general, -narrow]

course of expansion

course of change

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