This Handbook was compiled for the 43rd Linguistic Society of America Meeting in New York, December 28-30, 1968. It consists of the official program for the meeting, abstracts of 98 of the papers presented there, and advertisements. The abstracts are arranged in alphabetical order by author, and in some cases are accompanied by handouts. (JD)
LINGUISTIC SOCIETY OF AMERICA

Forty-Third Annual Meeting
December 28-30, 1968
New York, New York

MEETING HANDBOOK
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MEETING HANDBOOK
INTRODUCTORY NOTE

This Handbook has been prepared by the Center for Applied Linguistics to serve as a guide to those attending the Forty-Third Annual Meeting of the Linguistic Society of America, as well as to provide a permanent record of the papers presented at the meeting. It has been compiled and published with the approval of the Executive Committee of the Linguistic Society of America.

The Handbook consists of the official program of the meeting; the abstracts, as submitted, of the papers scheduled for delivery; and advertisements. The abstracts are arranged in alphabetical order according to author, and in some cases are accompanied by handouts.

The idea for such a Handbook was suggested by the Center for Applied Linguistics in 1964 and the first Linguistic Society of America Meeting Handbook was prepared for the winter 1965 LSA meeting in Chicago. The present volume contains many more abstracts than in previous years, reflecting the simultaneous sessions at the 1968 meeting. It also contains, for the first time, advertisements from publishers and professional organizations.

Allene Guss Grognet
Program of the Sessions

Meeting of the Executive Committee on Friday, December 27, at 2:00 P.M. in Rooms E-F, Mezzanine.
The Registration Desk will be open for an hour between 7:00 P.M. and 8:00 P.M., December 27, The Library, Mezzanine.
The Banquet and evening session on December 28 will be in the Ballroom.
All Sessions for reading of papers are divided into two sections which run simultaneously. Section One in each Session meets in the Terrace Room, and Section Two meets in the Ballroom.

Saturday, December 28

8:00 A.M. Registration
9:00 A.M. First Session, Reading of Papers

Section One
1. Sandra Scharff Babcock, Columbus, Ohio: Paraphrastic Causatives. (20 minutes)
4. Jeremy Brigstocke, University of California at Los Angeles: Transformationalization, Lexicalization or Stratification? (20 minutes)
5. Lauri Karttunen, University of Texas at Austin: Coreference and Discourse. (20 minutes)
6. Warren Cowgill, Yale University: A Speculative Reconstruction of the Pre-Indo-European Vowel System. (20 minutes)
7. Joseph C. Beaver, Northeastern Illinois State College: Contrastive Stress in Regularly Metered English Verse. (20 minutes)

Section Two
9. Arnold E. Horowitz, Hofstra University: Before you can know what you are talking about, you have to know if you are talking about anything at all—questions as to whether it’s worth saying come later. (20 minutes)
10. David Lawton, Central Michigan University: Creolization in a Dialect of Spanish: Puerto Rico. (20 minutes)
11. W. L. Ballard, University of California at Berkeley: A Working Hypothesis of Phonological Complexity. (20 minutes)
SATURDAY, DECEMBER 26 (continued)

12. George P. Faust, University of Kentucky: Nominal Complements and Expanded Predicators in English. (20 minutes)
14. Gregory Lee, Ohio State University: The Subject of Causation. (20 minutes)
15. Lawrence F. Bouton, University of Illinois: DO SO: Evidence of Derived Causative Verbs. (20 minutes)
16. Karl C. Diller, Harvard University: 'Resonance' and Language Learning. (20 minutes)

1:30 p.m. SECOND SESSION, READING OF PAPERS

Section One

17. Ronald W. Langacker, University of California at San Diego: Mirror Image Rules. (20 minutes)
18. Yakov Malkiel, University of California at Berkeley: Vocalic Gamuts and Consonantal Pillars in Romance Suffixal Derivation. (20 minutes)
20. C. Douglas Johnson, University of California at Santa Barbara: Some Consequences of a Weak Disjunctive Ordering Principle. (20 minutes)
21. William Labov, Columbia University: Negative Attraction and Negative Concord in Various English Dialects. (20 minutes)
22. Philip Lieberman, University of Connecticut and Haskins Laboratories: On the Physical Bases of Phonologic Features. (20 minutes)
23. Philip A. Lueldorff, University of Wisconsin: Theories of the Base. (20 minutes)
24. Paul Friedrich, University of Chicago: On the Meaning of Tarascal 'Numeral Classifiers.' (20 minutes)

Section Two

25. Richard T. Thompson, Georgetown University: The Significance of 'Bound and Free' in Syntactic Descriptions. (20 minutes)
26. Jerry L. Morgan, University of Chicago: Remarks on the Notion 'Possible Lexical Item.' (20 minutes)
27. Clyde E. Williams, Southwest Regional Laboratory for Educational Research and Development: Some Phonological Rules in Bolivian Quechua. (20 minutes)
28. Leigh Lisker and Arthur S. Abramson, University of Pennsylvania, University of Connecticut, and Haskins Laboratories: Distinctive Features and Laryngeal Control. (15 minutes)
30. David DeCamp, University of Texas at Austin: Clusters of Pretention in Jamaican Creole: A Problem in Rule Ordering. (15 minutes)
31. Madeline E. Ehrman, Yale University: Deixis in Bolinao. (20 minutes)
32. Frank W. Heny, University of California at Los Angeles: Assertion and the Deep Structure of Quantifiers. (20 minutes)

8:00 p.m. ANNUAL INFORMAL BANQUET FOR MEMBERS AND THEIR GUESTS. Ballroom

After the Banquet, the following address will be given:

Presidential Address by Eugene A. Nida, American Bible Society: The Science of Translating.

Sunday, December 29

9:00 a.m. THIRD SESSION, BUSINESS MEETING. Ballroom

A. Minutes of the last meeting.
B. Report of the Secretary and action thereon.
C. Report of the Treasurer and action thereon.
E. Amendment of the Constitution.
F. Report of the Executive Committee and action thereon.
SUNDAY, DECEMBER 29 (continued)

H. Reports of the Standing Committees, Special Committees, and Delegates and action thereon.
I. Report of the Nominating Committee and action thereon.
J. Appointment of the Committee on Resolutions.
K. Other business, proposed by any member of the Society.

1:30 P.M. FOURTH SESSION, READING OF PAPERS

Section One

33. Kostas Kazazis, University of Chicago: What Are Phonetic Performance Rules? (20 minutes)
34. Carleton T. Hodge, Indiana University: Afroasiatic Pronoun Problems. (15 minutes)
35. Edgar A. Gregeren, City University of New York, Queens College: Kongo-Saharan, A New African Language Phyhum. (15 minutes)
36. Dale I. Purtle, American University: Tone from Vowel Register, An Asian Areal Feature. (20 minutes)
37. Susan H. Houston, Northwestern University: A Sociolinguistic Consideration of the Black English of Children in Northern Florida. (20 minutes)
38. Norman N. Markel and Clair Ann Sharpless, University of Florida: Socio-Economic and Ethnic Correlates of Dialect Differences. (20 minutes)
39. J. F. Staal, University of California at Berkeley: Ton of Rules in Panini's Grammar. (20 minutes)
40. David Ellis Rogers, University of Michigan: The Karakas of the Astadhyayi. (20 minutes)

Section Two

41. David C. Bennett, Yale University: A Stratificational View of Polysenry. (20 minutes)
42. James D. McCawley, University of Chicago: English as a VSO Language. (20 minutes)
43. Robert A. Hall, Jr., Cornell University: 'Neuters,' Mass-nouns and the Ablative in Romance. (20 minutes)
44. Karl E. Zimmer, University of California at Berkeley: Psychological Correlates of Some Morpheme Structure Conditions in Turkish. (20 minutes)
45. Paul R. Turner, University of Arizona: Grammar for the Speaker and Hearer. (15 minutes)
46. Robert L. Nowicki, Yale University: 'Subordinate' Clauses in Germanic. (20 minutes)
47. Theo Vennemann, University of California at Irvine: Ablaut in Modern Standard German, or Phonological Conservatism. (20 minutes)
48. William James Russell, University of California at Los Angeles: Syntactic Universals. (20 minutes)

7:00 P.M. FIFTH SESSION, READING OF PAPERS

Section One

49. Gerald L. Cohen, University of Missouri: An Attempted Explanation of English 'Take Sick,' 'Get Sick,' and 'Keep Sailing.' (15 minutes)
50. Lowell Bouma, University of Georgia: The Semantics of the Modal System in Contemporary German. (20 minutes)
51. Steven B. Smith, University of California at Los Angeles and Bunker-Ramo Corporation: The Semantics of Negation. (20 minutes)
52. Arlene I. Moskowitz, University of California at Berkeley: A Stage in the Acquisition of English Phonology. (20 minutes)
53. Herbert Penzl, University of California at Berkeley: Gradualness of Sound-change and the i-umlaut. (15 minutes)
54. Hans Henrich Hock, University of Illinois: On a-umlaut of i in Germanic. (20 minutes)

Section Two

55. Anoop C. Chandola, University of Arizona: Metalinguistic Structure of Drumming. (15 minutes)
56. George Lakoff, Harvard University: Selectional Restrictions and Beliefs about the World. (20 minutes)
57. Robin T. Lakoff, Language Research Foundation: Some-Any Revisited. (20 minutes)
58. Karl V. Teeter, Harvard University: An Algonquian Philosophy of Inflection. (15 minutes)
59. William Pulte, Jr., University of Texas at Austin: Front Rounded Vowels in Pennsylvania German. (12 minutes)
60. W. K. Percival, University of Wisconsin at Milwaukee: On the Non-existence of Cartesian Linguistics. (20 minutes)
Monday, December 30

9:00 A.M. SIXTH SESSION, READING OF PAPERS

Section One

61. Thomas W. Gething, University of Hawaii: A Semantic Analysis of Modern Thai /cay/. (15 minutes)
63. Geoffrey Sampson, Yale University: Noun-Phrase Indexing, Pronouns, and the 'Definite Article.' (20 minutes)
64. Andrée F. Sjoberg, University of Texas at Austin: The Socio-Cultural Dimension in Transformational Theory. (15 minutes)
65. James E. Hoard, University of Kansas: Quileute Prosody. (15 minutes)
66. Lyn Roland, University of California at Berkeley: A Discussion of the So-called 'Reflexive' in English. (20 minutes)
67. Frederick J. Newmeyer, University of Illinois: Modal Auxiliaries as Causative Constructions. (15 minutes)
68. Henry Kahane, University of Illinois: Risk. (10 minutes)

Section Two

69. William H. Jacobsen, Jr., University of Nevada: Traces of Glottalized Resonants in Makah. (20 minutes)
70. Jane J. Robinson, IBM Watson Research Center: Dependency Structures and Transformational Rules. (20 minutes)
71. Maria Tsipra and James Foley, University of North Carolina: The Development of Consonant Plus yod Clusters in Cretan and Cypriot Greek. (20 minutes)
72. Eric P. Hamp, University of Chicago: The Greek Aorist Passive in Theta. (20 minutes)
73. Sanford A. Schane, University of California at San Diego: The Hierarchy for the Deletion of French 'F. Muet.' (20 minutes)
74. Patricia M. Wolfe, University of California at Santa Barbara: Exchange Rules and the Impairment of Intelligibility. (20 minutes)
75. Walburga von Raffier Engel, Vanderbilt University: Competence, A Term in Search of a Concept. (20 minutes)

1:30 P.M. SEVENTH SESSION, READING OF PAPERS

Section One

77. Bill J. Darden, University of Colorado: Rule Orderings in Baltic and Slavic Nominal Accentuation. (20 minutes)
78. Ignatius G. Mattingly, Haskins Laboratories and University of Connecticut: Synthesis by Rule as a Tool for Phonological Investigation. (15 minutes)
79. Jacob Mey, University of Texas at Austin: The Eskimo Transitive Verb: A Reappraisal. (20 minutes)
80. Wick R. Miller, University of Utah: Consonantal Processes in Shoshoni. (20 minutes)
81. Peter A. Reich, Yale University: The Finiteness of Natural Language. (20 minutes)
82. Francis Juhasz, Columbia University: An Experiment on the Interpretation of Stress and Intonation as Syntactic Markers in Hungarian. (20 minutes)

Section Two

83. Robert J. Schoes, University of Florida: Imitation of Sentential and Non-Sentential Word Strings by Children and Adults. (20 minutes)
84. Harry A. Whitaker, University of California at Los Angeles: Linguistic Competence: Evidence from Aphasia. (20 minutes)
85. John Wolff, Cornell University: The root *kan 'eat' and Affixation in Proto-Malayo-Austronesian. (15 minutes)
86. Chin-W. Kim, University of Illinois: On the Regularity of the So-called Irregular Verbs in Korean. (20 minutes)
87. Michael Shapiro, University of California at Los Angeles: Toward the Recognition of Iconicity in Language. (20 minutes)
88. David G. Lockwood, Michigan State University: Two Species of Concord in the Czech Noun Phrase. (20 minutes)
89. D. Terence Langendoen, Ohio State University and Rockefeller University: Modal Auxiliaries in Infinitive Clauses in English. (10 minutes)
Abstracts and Handouts
This paper examines, within the framework of case grammar, the alternant relationship that holds between the simplex in (1) THE THOUGHT FRIGHTENED ME and (2) THE THOUGHT MADE ME FRIGHTENED, and between the simplex in (3) JOHN TREMBLED WITH FEAR and (4) FEAR MADE JOHN TREMBLE. It is shown that while the causative paraphrase in (2) is optional, the shape of (4) is determined by subject selection. The effects of this subject choice on the verb are described, and paraphrastic causatives are shown to be formally and semantically distinguished from complex causatives such as I MADE JOHN DO HIS HOMEWORK. The explanatory use of the paraphrastic interpretation is discussed, and rules are provided for the generation of sentences (3) and (4). Finally it is noted that the explanation of these paraphrase relationships obliges us to revise our criteria for analyzing a sentence as complex in its deep structure.
Paraphrastic Causatives

(1) Fear made John tremble.
(2) John trembled with fear.
(3) The sun made the sea glisten.
(4) The sea glistened in the sun.
(5) The cold froze John.
(6) John froze from the cold.
(7) The cold made John freeze.
(8) I made John do his homework.
(9) John was made to do his homework.
(10) *John was made to tremble with / by fear.
(11) *The sea was made to glisten in / by the sun.
(12) John did his homework because I made him.
(13) John did his homework because he was made to.
(14) *John trembled because fear made him.
(15) *John trembled because he was made to.
(16) *Fear trembled John.
(17) The door opened / closed.
(18) John fainted from hunger.
(19) Hunger made John faint.
(20) The flag fluttered in the breeze.
(21) The breeze made the flag flutter.
(22) John waved the flag.
(23) The flag waved in the breeze.
(24) *The breeze waved the flag.
(25) The breeze made the flag wave.
(26) The thought frightened me.
(27) The thought made me frightened.
(28) It distressed me.
(29) It made me distressed.
(30) John was frightened by the thought.
(31) *John was made frightened by the thought.
(32) I am happy / sad to hear that.
(33) It makes me happy / sad to hear that.
(34) The news saddened John.
(35) *The news happied John.
(36) He was made sad by the news.
(37) A Juan le enfurece la injusticia.  
'Injustice infuriates John'.
(38) A Juan le pone furioso la injusticia.  
'Injustice makes John furious'.
(39) A Juan le entristeció la noticia.  
'The news saddened John'.
(40) A Juan le puso triste la noticia.  
'The news made John sad'.

(41)

(42)
(43)
\[ S \]
\[ NP \]
\[ M \]
\[ P \]
\[ +Causative \]
\[ fear \]
\[ past \]
\[ tremble \]
\[ inside \]
\[ John \]

(44)
\[ S \]
\[ NP \]
\[ M \]
\[ P \]
\[ +Causative \]
\[ fear \]
\[ past \]
\[ make \]
\[ tremble \]
\[ inside \]
\[ John \]

(45)
\[ S \]
\[ NP \]
\[ M \]
\[ P \]
\[ +Causative \]
\[ fear \]
\[ past \]
\[ make \]
\[ tremble \]
\[ John \]

(46)
\[ S \]
\[ NP \]
\[ M \]
\[ P \]
\[ +Causative \]
\[ fear \]
\[ make \]
\[ tremble \]
\[ John \]
fear made John tremble

past tremble inside John with fear

inside John past tremble with fear

John past tremble with fear
(51)

S
  /\  \
 NP  P
  /\    /\  \
 N  V    I  NP
     \   /  \
    "John"  "trembled"  "with fear"

[12]
A WORKING HYPOTHESIS OF PHONOLOGICAL COMPLEXITY

Present generative phonology does not provide elegant means of analyzing such contrasts as \( \text{ia} \neq \text{ia} \), which occur in several East Asian languages. It also does not allow for economical description of natural classes in Finnish (e.g., \( \text{ei,a} \) vs. \( \text{uu,aa} \)). These and other examples show the need for a distinctive feature 'Relative Prominence.'

Various kinds of phonological changes must be expressed in an ad hoc manner in present generative phonology. For example, diphthongization is covered by the rather awkward rule

\[
\text{zero } \rightarrow \text{ glide}
\]

in Chomsky and Halle's analysis of English; this and other examples support the need for an analysis wherein certain sound clusters, e.g., diphthongs, can be described as single units and not sequences of phones. A distinctive feature 'Complex' is proposed to cover these kinds of units.

A speculative hypothesis of a syllable structure grammar with transformational rules governing 'Relative Prominence', 'Complex' and syllable structure bracketing is presented. This hypothesis will account neatly for several seemingly disparate and peripheral phonological phenomena. It will also account for certain kinds of continua found in dialect geography.
The present study considers the effect of contrastive stress in determining stress maxima in accordance with rules of meter devised by Halle and Keyser (1966) and rules of stress employed by Beaver (1968). Elements of the rules essential to the study are as follows. A verse line consists of a sequence of $n$ positions, certain of which are weak, and certain of which are strong. Iambic pentameter has 10 positions, the odd ones weak and the even ones strong. A stress maximum may occur in an even position, and may not occur in an odd, but not all even positions need be so occupied. A stress maximum is a syllable carrying linguistically determined stress preceded and followed by syllables with lesser stress. Syllables are either A) principally accented syllables of full lexical words (nouns, verbs, deictic pronouns, most adjectives and adverbs), or B) all other syllables. A syllable of type "A" bordered by syllables of type "B" is a stress maximum.

The problem is whether contrastive stress can raise a syllable of type B to or above the metrical stress status of a type A. It appears that contrastive stress might be either a) metrically operative, b) metrically inoperative, or c) a metrical option.

Some thirty instances of contrastive stress in three poets (Donne, Browning, Robinson) given to poetic monologues are studied. The instances are classified six ways, according to whether the occurrences are on even or odd position, and according to whether they are adjacent to an (otherwise) stress maximum. The implications of each of the groupings are discussed. The evidence is not final, but establishes in any event that contrastive stress is not mandatorily operative in a metrical framework. The tentative conclusion is that contrastive stress is an optional metrical operative, but that poets exercise the option infrequently.
A STRATIFICATIONAL VIEW OF POLYSEMY

The distinctions intension vs. extension, potential vs. actual meaning (A. McIntosh, J.O. Ellis), and additive vs. privative meaning (M. Joos) are first briefly discussed, because of their relevance to the question of polysemy. In the course of this discussion, certain parallels are drawn between phonology and semology.

Three approaches to polysemy are then considered: (1) the dictionary approach; (2) Jakobson's 'gesamtheutung' approach; and (3) that of Weinreich, which is in a sense a compromise between (1) and (2).

Finally, the approach that fits most naturally into the theoretical framework of stratificational grammar is illustrated from a description of English prepositions. This approach would appear to lie between those of Weinreich and Jakobson. One criticism that is made of Weinreich's position (and my own earlier position, cf. "English Prepositions: a Stratificational Approach", Journal of Linguistics 4:2 (1968)) is that it is tied too closely to surface structure. It requires the recognition, for instance, of two senses of the preposition over to account for the ambiguity of the sentence the helicopter is over the hill, where over seems to be equivalent to either (a) above or (b) on the other side of. A preferable way of accounting for this ambiguity involves postulating the sememes 'path' and 'completion' as being present in the underlying representation of the (b) version of the above sentence but having zero realization. Version (b) can then be said to mean: 'the helicopter is at the end of a path leading over (= above) the hill'; and the meaning of over in (a) and (b) is the same.
The semantic description of the German modal system which is presented in this paper is based on the approach which is found in Martin Joos' *The English Verb: Form and Meaning*. Thus modal assertion (presence of a modal in a clause) is treated as a grammatical signal analogous to other verbal signals. As a grammatical category modality stands in specific opposition to the eventual (clause without a modal) and is, by means of the six different modals, capable of expressing six different kinds of relation to reality. Each modal is in turn a grammatical signal within the category of modality and can also be defined in terms of a basic meaning, which is available for a wide variety of uses. It is suggested that the modals comprise a very tight set, which can be graphically displayed in a kind of matrix as follows:

<table>
<thead>
<tr>
<th>imminent</th>
<th>biased</th>
<th>precarious</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>objective</strong> marked: MUSS</td>
<td>SOLL</td>
<td>DARF</td>
</tr>
<tr>
<td><strong>subjective</strong> unmarked: WILL</td>
<td>MAG</td>
<td>KANN</td>
</tr>
</tbody>
</table>

The labels used in the above matrix are meant to represent the distinctive features inherent in the modal system. When a speaker uses an objective modal it means that he views the specified event as being initiated by an agency outside the actor; with a subjective modal the speaker indicates that the actor is the initiator of the event or that the operation of an outside agency is irrelevant to the speaker at the time of speaking (thus the unmarkedness of the subjective modals, a feature which explains, for example, the use of both KANN and DARF in the sense of "permission"). The superior labels can be taken as points along a probability continuum, so that the imminent and the precarious modals represent the extremes and the biased occupy a position somewhere in between. That is, the use of MUSS and WILL means that the speaker considers the realization of the event very probable (imminent), whereas DARF and KANN mean that the event has a (precarious) 50-50 chance of realization. It is thus sufficient to circumscribe the meaning basic to all uses of MUSS, for example, with the label "objective imminent", which sets MUSS off from all the other modals.
This paper will demonstrate that the class of verbs whose causative and non-causative forms are phonologically identical (burn, freeze, chip, etc.) differ from those for which the two forms are distinct (kill, raise, set, etc.) in that the causative forms of the former are syntactically complex, being derived by a last cyclic causative rule, while the latter are lexical items. It will be further demonstrated that the former group can be subdivided into those whose underlying form consists of a causative element + a non-causative action verb (burn, freeze) and those for whom it is a causative element + a stative verb (chip).

These conclusions are reached by applying the DO-SO transformation to various pairs of verbs of the types given above, arranged so that one of the pair is causative, the other non-causative. In doing so, we note that for the freeze-type verb, the causative may act as antecedent of the non-causative, but that the converse is not true. For example, Mike froze the liquid at sub-zero temperatures so that it would do so instantaneously, but not *So that the liquid would freeze instantaneously, Mike did so at sub-zero temperatures. We note further that if the causative verb phrase is paraphrased by cause the liquid to freeze, the second sentence would be grammatical: ... Mike caused it to do so at sub-zero temperatures.

The feature [± causative] seems to play a complicated role in the identity constraints on the DO-SO rule as regards the freeze-type verbs. Unless we order DO-SO before the causative rule and then restrict the latter to verbs that are [-PRO], establishing the identity constraints on DO-SO will be extremely complex. But a cyclic causative will always apply at least one cycle before DO-SO; hence, the former must be last cyclic.

The raise-type verbs differ from the freeze-type in that the former can never act as antecedent for its non-causative counterpart (rise) even when (as here) the latter is [-stative]. Hence, raise cannot be generated by the last cyclic causative rule from the phrase cause X to rise. The causative form of the chip-type verb also cannot act as antecedent for its non-causative form: *This plate chipped today and that one did so.
yesterday. Here chipped is equivalent to became chipped, a stative verb form. Assuming that the non-causative form of chip is, in fact, [+stative] would explain its failure to undergo DO-SO, while the grammaticality of John chipped a glass today and I did so yesterday is explained by the presence of the [-stative] causative element combined with the non-causative chip by the causative transformation. Chip-type verbs, then, like the freeze-type, are derived by the last cyclic rule.
It seems to be implied in some of the recent literature that linguistics is currently in a period of 'normal science', where Transformational-Generative Grammar is the accepted paradigm. However, a series of intramural disputes about fundamental aspects of that theory casts doubt on this assumption. One of the most serious of these disputes concerns the characterization of idiosyncratic processes in the grammar. Another concerns the level of the base.

The present paper is a discussion of part of the lexical representation of the Turkish verb. Various suffixes may be added to the verb stem. These are paralleled by various syntactic correlations within the sentence. The limitations on the productivity of these suffixes are semantically determined. I therefore claim that there is no way a semantic interpretation of a syntactic string can explain these facts, since the flow of the logic is in the opposite direction.

Further, the meanings of these suffixes, singly and in combination, are not always interpretable from the syntax. Seeming syntactic idiosyncrasy is here the false product of the arbitrary notion of a syntactic generator. Only a stratificational treatment allows a homogeneous analysis true to the facts of the data.
This paper describes the syllabics used in the pedagogy of Tabla (a pair of drums). The right hand drum uses these five simple syllables: na, tu, thun, ti, ta. The left hand drum uses these two simple syllables: ka, ga. The complex syllables are: tin, ta, dhin, dha, te, dhe. Each simple syllable is one particular stroke on one particular part of the drum by a particular finger. A complex syllable is two simultaneous strokes on the two drums. Thus, tu + ka = tin, na + ka = ta, tu + ga = dhin, na + ga = dha, ti + ka = te, ti + ga = dhe. A rhythm cycle in Indian music involves a particular number of units (or beats). One unit experience is expressed by one or more syllables or zero (where zero marks only the disappearance of a syllable). The lower is the speed of a rhythm, the higher is the number of syllables possible in one unit and vice versa. This metalinguistic structure of drumming will be demonstrated on the drums along with the presentation of this paper.
My paper will attempt to analyze the origin of expressions in English with "take", "get", and "keep", e.g. take sick, get sick, keep smiling. The proposed explanation is:

(1) Although take, get, and keep are considered morphemes, they are subject to a further reduction from the point of view of meaning:

<table>
<thead>
<tr>
<th></th>
<th>Get</th>
<th>Have</th>
<th>Keep</th>
</tr>
</thead>
<tbody>
<tr>
<td>primary denotation:</td>
<td>possession</td>
<td>possession</td>
<td>possession</td>
</tr>
<tr>
<td>secondary denotation:</td>
<td>incipiency</td>
<td>state</td>
<td>continuation</td>
</tr>
</tbody>
</table>

Take and get represent the incipiency of possession.
Have represents the state of possession.
Keep represents the continued state of possession.

(2) In certain usage the secondary denotation becomes the primary one, and the original primary one is totally lost. For example, in take sick or get sick the notion of possession is lost from take and get, and what is left is the notion of incipiency.

Therefore one finds: e.g. take sick

inciency + state of sickness

It will be suggested that this sort of development has wide applications beyond the three expressions analyzed above and is in fact fundamental to an understanding of English syntax. It is also useful to examine the concept of the morpheme in the light of the above analysis, which suggests that the morpheme is not the ultimate minimal unit of meaning.
As currently reconstructed, the Proto-Indo-European vowel system is typologically aberrant in that 1) the most common vowel was e, while a, if it is posited at all, was rare; and 2) to explain exceptions to Brugmann's Law, it seems necessary to posit two short back o-vowels against a single short front e-vowel.

These difficulties can be avoided by positing an underlying system in which PIE *e was a and PIE ablaut *o was a, followed by a development similar to that of the a and å of Early Modern Persian: the length contrast was lost (except for open syllables in Indo-Iranian)—new long vowels developing by contraction and compensatory lengthening (this latter including the so-called lengthened g-ad e ablaut)—and a contrast in timbre replaced it as short *a became raised and fronted to e while long *å was backed, raised, and rounded to o. There is room in this system for symmetrical pre-IE non-ablauting *e and *o, the former merging in PIE with e from *a and the latter distinguished from PIE o < *i only by its failure to give long reflexes in Indo-Iranian open syllables.

It follows that the action of the so-called a-coloring laryngeal(s) would have been to inhibit shift of pre-IE *a to e, rather than to cause an *e to shift to a; this agrees with what can be observed in Arabic dialects. The relatively few words with å which cannot be accounted for by laryngeals would have entered Indo-European only after the shift of pre-IE *a to e.
There are obvious similarities between the accentual alternations in the nominal inflections of Baltic and Slavic. They inherited from Indo-European a distinction between "strong" and "weak" cases. In Sanskrit nouns with mobile accent, the strong cases took the accent on the stem-final vowel, while the weak cases were accented on the first vowel of the desinenence. Slavic and Baltic shared an innovation whereby this alternation changed to one between the initial and last syllable of the word, and the alternation spread to other classes of nouns. There are, however, differences between Baltic and Slavic accentuation. Baltic acuta mobile stems correspond to Slavic circumflex: Lithuanian gálu, Serbo-Croatian glávu; "head". Also, certain Baltic circumflex stems correspond to Slavic acutes: Lithuanian mifti, Serbo-Croatian smrt; "death". (All the examples are in the accusative singular.)

It is the purpose of this paper to show that if one compares the two reconstructed languages as synchronic states, it is possible to account for the differences by using the same rules but applying them in different order. The rules are:

1. Assign stress to unaccented words.
2. Make long stressed syllables rising.

Baltic had the order 1, 2, 3. Slavic had 3, 2, 1.
The order of rules in a synchronic phonology tends to recapitulate the historical order of sound changes. To a lesser extent it also mirrors both the sociolinguistic and stylistic stratification of the language. An interesting exception are the rules for palatalization and cluster reduction in Jamaican Creole. The synchronous rules which generate the palatalized initial clusters ([sc-]) found in the pretentious style of lower class speakers are apparently inconsistent with the stylistic shifts which result in these clusters, with the sociolinguistic level of the speakers who use them, and with the probable chronology of the relevant historical changes. The unpleasant alternatives are a set of rules which are strongly counterintuitive vs. the necessity of messy and otherwise unmotivated innovations in phonological theory. Additional examples of the difficulties which correction and hypercorrection raise for generative phonology indicate that the problem is not limited to Jamaican Creole.
Eric Lenneberg has used the metaphor of "resonance" as one of three concepts which are supposed to explain "most of the general phenomena of natural languages" (Biological Foundations of Language, p. 380). Language is species specific behavior. Children require a social setting but do not require formal instruction to learn their native language. Therefore, it is thought truer to say that a child begins to "resonate" to the language behavior of others in his social group, than to say that he "learns" his mother tongue.

This paper will argue that "resonance" is a disastrous metaphor to use for explaining language learning: a) it is actually inconsistent with the empirical data and the other theoretical premises presented by Lenneberg in his book, and b) it does not fit well with Chomsky's rationalist theory of language learning, although Lenneberg seems to think it does.

To deal with the problems raised here, we will examine crucial evidence from the relationship between the child's native language learning and the adult's foreign language learning.
Audrey R. Duckert, University of Massachusetts
THE SPEECH OF PLYMOUTH, MASSACHUSETTS: A COMPARISON OF DATA GATHERED FOR
THE LINGUISTIC ATLAS OF NEW ENGLAND (1933) WITH THAT OBTAINED FOR THE
DICTIONARY OF AMERICAN REGIONAL ENGLISH (1967-68)

Plymouth, Massachusetts, Linguistic Atlas of New England community
112, has been re-studied (1967-68) for the "LANE Revisited" project and
for the Dictionary of American Regional English. The new field record
employs the Cassidy-Duckert questionnaire, which has now been collated
with the LANE maps, facilitating a comparison of the two records.

In addition to Early American descendants, Cape Verdean Portuguese
and Italians were included as informants in 1967-68. The rise in numbers
of these two groups, increased tourism, and the feasibility of commuting
to Boston are but three of the possible speech-influencing factors that
have developed in Plymouth since 1933, when the LANE records were made.

One of the original LANE informants was also interviewed in 1967;
there are interesting contrasts as well as consistencies in the two sets
of responses. Portions of a tape of the 1967 interview will be played
in connection with a handout showing his responses to both interviews
as well as those of a woman informant, also of old-family background,
who is a generation younger.

This is part of a larger study which seeks, by comparing LANE and
DARE data, to assess the nature and rate of linguistic change in several
New England communities.
In this treatment of the deictic system of a Philippine language, we shall deal with sememes and their realizations. Types of sememes include contentives and relationals. The relationals in turn include markers which behave as described by Jakobson in *Shifters, Verbal Categories, and the Russian Verb* (Harvard University, 1957). Markers may occur in sets, one of the most important of which is the deictic set with three members. These deictic markers may occur with other markers, e.g. locative or instrumental, or else alone. Realizations of all such possibilities are discussed.

The deictic markers which occur without further markers are realized as pronouns. Because pronouns interact with the syntactic realizations of nominalization, the articles, it is necessary to include a brief discussion of such nominalization. The paper ends with discussion of the behavior of pronouns in narrative and their relation to some basic semantic features of predications (the realizates of clauses).
Walburga von Raffler Engel, Vanderbilt University

COMPETENCE, A TERM IN SEARCH OF A CONCEPT

The "fundamental distinction between competence (the speaker-hearer's knowledge of his language) and performance (the actual use of the language in concrete situations)" has always been recognized by linguists and psychologists interested in child language and in speech programming. In studies on bilingualism, semantic interference has traditionally been described apart from phonological intrusions and I for myself have insisted on the separation of the semantically and the phonologically levels.

Considering, however, that language is not a "well-defined system" these two facets of knowledge and behavior cannot be investigated separately. Their interdependence is evidenced not only from historical linguistics and from synchronic considerations such as that "there is a great deal of individual variation in bilinguals' speech", but it appears most clearly in the development of child language. In pedolinguistics, the distinction between active and passive language proves to be essential.

This paper will try to show that a child's competence is dependent on his performance. In particular, an attempt will be made to demonstrate how the semantic component of a child's lexicon is formed through his experience. Inborn capacities, beyond a generic faculté de langage will be minimized.

As a conclusion, it is suggested that the term competence - individual and general - is in need of a more specific definition.


9 The data on which the research is based were collected by a student of mine, Carol Barach, A Description of the Language of David Barach at the Age of Three Years, unpublished paper, Nashville, Tenn., 1968.


11 Carol Barach, cit., and data from my son's language.
1) Given a living natural language, what is known stems from a significant sample of the performance, oral and/or written
   a) either of a number of speakers of the standard form of that language. The rules change diachronically subsequent to the change in performance of this particular class of speakers. Prescriptive grammars have formulated and reformulated these rules.
   b) or of all social segments of speakers. Descriptive grammars deal with these rules in the section on macrolinguistics.

2) Given a corpus of limited data, these have been studied
   a) by philologists for extinct languages. The rules are subjected to change as more data are unearthed.
   b) and by anthropolinguists. The rules are altered if more extended field work reveals additional information.

3) Concerning the constant flux of development within child language, the gradual acquisition of rules could be dependent on
   a) a specific inborn evaluation algorithm, which could
      A) innately cover all possible languages. This theory is untenable because a forgetting device is contrary to all other human learning processes.
      B) or be limited to the universal (i.e. universally present) features. The additional rules which are restricted to a particular language would then be acquired in a somewhat different manner. This theory can neither be proved nor disproved because of the incomplete state of our present knowledge of language universals.
   b) a discovery procedure, where all the rules are learned by processes of generalization and analogizing. This theory rests on the assumption that human language is species specific. The term faculté de langage by definition comprises, a.o., such aptitudes as "the principle of cyclic application"; but specific
syntactic rules such as transformations would not be considered within the inborn portion of the human cognition system. (Among the followers of this theory, the Whorfians may consider them part of the acquired portion.) This discovery procedure could be

A) language-specific,

B) or, of the same type as all other human learning processes.
English has grammatico-semological fields of complementation (e.g. those tentatively labeled Reference, Source, Destination) of the general shape marker + complement. Postverbally, the (prepositional) marker may sometimes be suppressed (Lakoff, 1965), sometimes must be overt. Nominal complements comprise nominal complexes and their substitutes (e.g. pronouns and reflexives). It follows from this description that many linguistic forms ordinarily classed as adjunctive are here taken as representative of one or another field of complementation.

Unexpanded predicators in English are normally verb phrases (Twaddell, 1963; Joos, 1964). The pertinent expanded types are: (1) verb phrase + predicate adjective (He was (seemed, became) sure of his ground.); (2) verb phrase + marker (He was talked about.); (3) verb phrase + noun + marker (He was taken advantage of.). The obvious test for (2) and (3) is whether there are active and passive forms "that are identical in meaning" (Fodor and Katz, 1964, 483). Limited observations suggests that markers expressed in the active will normally be found in the correlative passive: We watched for it. It was watched for. But exceptions are not hard to find: We asked for contributions. Contributions were asked.

In effect, expanded predicators have long been recognized, but the analysis proposed here systematizes the relationships between predicators and fields of complementation in a way that has an important bearing on the analysis of both transitive two-word verbs (ask for; laugh at) and complements with their markers. In addition, the analysis sheds a somewhat different light on the structures with which so-called "tertiary passives" can be matched (make love to; be made love to).

Of course many questions remain unanswered, many avenues remain to explore as I have time and energy. This paper has taken fields of complementation for granted only because I demonstrated the system of them last August at Kiel. Today I have taken the second step.
Paul Friedrich, University of Chicago

ON THE MEANING OF TARASCAN "NUMERAL CLASSIFIERS"

On the basis of how they are enumerated, replaced or modified in certain positions, the nouns of Tarascan (Michoacán, Mexico) fall into four main classes: count, mass, adimensional, and dimensional. The dimensional nouns, in turn, divide into three classes: "longish, flattish, and roundish." The relation of dimensional noun to classifier is interesting in several ways: (1) replacement is governed not only by grammatical classes, but also by the speaker's conscious and subconscious evaluation of the referent "out there" in the speech situation; (2) the signification of the classifiers is not "longish, tortilla-like, or ball-like," as is often alleged, but is dimensional in an abstract sense that accounts for many apparent irregularities; (3) the trichotomy of dimension is conceptually congruous with a larger network of grammatical categories—in particular, with a feature of meaning that pervades much of the conjugation, and, on the other hand, with the meanings of a large set of derivational categories. The results of this analysis are related to the problem of treating grammar as a conceptual system.
A problem in semantic analysis of modern standard Thai has been selected for discussion. The synchronically polysememic morpheme /cay/ has meanings approximately equivalent to English 'heart, mind, spirit' and 'breath'. A purely descriptive approach to this form would require two separate dictionary entries for /cay/. An examination of the history of /cay/, however, sheds interesting light on the modern sememes. The morpheme is described first using internal reconstruction and then the comparative method. The disparate results of these two diachronic approaches are weighed, a choice proposed, and a Proto-Tai source suggested for the modern reflexes.

This study has been based on data gathered in interviews with non-naive native speakers whose intuition has been utilized. The data consist chiefly of compounds or phrases in which the elements are in close relationship and include such forms as /cayyen/, /caydii/, /caylooy/, /diicay/, and /klâncay/. These forms respectively may be roughly glossed 'to be calm', 'to be kind-hearted', 'to be absent-minded', 'to be happy', and 'to hold one's breath'.

[34]
In this paper I try to show that Greenberg's Nilo-Saharan and Niger-Kordofanian groups are genetically related and coordinate members of a still larger linguistic phylum, Kongo-Saharan. Many previous writers have suggested the likelihood of the unity of all 'Black African' languages (which is essentially what Kongo-Saharan entails), but have not proceeded beyond some vaguely stated intuition of this unity or else have produced inadequate arguments. The initial impetus for the present attempt was Margaret Bryan's survey of so called T/K and N/K morphological elements, the distribution of which cross-cut language groupings established at the time. Here a considerable number of other morphological as well as phonological and lexical material is marshaled in defense of the proposed new phylum.
In Asturian and Central-South Italian dialects, there is a category of collective nouns, pronouns, and definite articles, which is usually called 'neutro de materia' and considered a continuation of the Latin neuter. This category is not a neuter in the traditional sense of the term, but represents a grammatical category hitherto unrecognized in Romance, the mass-noun, and is to be traced to an (also unsuspected) survival of the Latin ablative, through its use in partitive constructions, first with and then without de 'of'.

[36]
Theories of the origin of the Classical Greek aorist passive in -\(\Theta\\rangle\)- have been many, and inconclusive; they normally start with the assumption of an element in *Θ, i.e. IE *dh, which is otherwise obscure.

When one looks at the endings as a set, one is struck by the fact that the personal endings (including vowel \(γ\)) are identical with the past tense, etc., of the verb 'to be'. The widespread IE participle formation in -\(\text{t}_6\)- (Lat. dic-tus, Skt. kr-tâ-) is notably absent from the central verbal paradigm of Greek; it is displaced by the rich array of symmetrical participles, including -meno-. We might wonder where the -\(\text{t}_6\)- has gone.

The sigmatic aorist had a significant productivity in Greek; a degree of correlation can be noted between the sigmatic aorist and the aorist passive in theta. An early Greek (e.g. Mycenaean) cluster of the form stop + s + stop, regardless of aspiration, yields Classical Greek aspirate + aspirate.

Thus, an aorist passive phrase formed from a participle + past of 'be' (as Eng. was kept), when the aoristic sigma was added as a hyper-characterization to a root in final stop, would result in stop + s + to- > root-final (aspirate by rule) + theta. In the fem. sg. and all plurals the vowel ending of the old participle contracted with the initial augment of 'was', leading to the fusion of this originally complex VP.
Ambiguous sentences have always had a special interest for transformational theory since they provide evidence that more than one structure underlies a single surface string, thus motivating a search for additional, appropriate base forms. Lakoff has pointed out that (1) is ambiguous, with readings equivalent to (2) and (3).

\begin{enumerate}
\item 100 soldiers shot 2 students
\item 100 soldiers shot 2 students apiece
\item 100 soldiers shot a total of 2 students
\end{enumerate}

To account for this ambiguity he has proposed to obtain the quantifier, 100, from a higher sentence for the reading paraphrased by (2) and from a relative clause for the other. Many serious arguments have been adduced against such an analysis by Jackendoff, Partee and others.

In this paper further objections are raised and it is argued that the difficulty of proposing a viable alternative follows from two specific inadequacies in the Aspects model of transformational grammar, which persist in most current reformulations. In particular, that model does not separate grammatical relations from, for example, predication and assertion. Further, it makes extensive use of recursion on the initial symbol of the grammar, which represents the sentence. These characteristics prevent it from capturing naturally the relations between presupposition, assertion, negation and emphasis, and hence, the deep structure of quantifiers.

A possible solution to the quantifier problem is outlined. This involves a new base with extended reference marking and with grammatical units which incorporate only some of the relations exhibited by a sentence. The power of embedding is effected largely by means of the indices of the reference system and not by recursion on S or any comparable symbol, a natural development of recent work by McCawley and others. It is shown how these changes allow a profitable reformulation of the issues, and that the proposed solution has important implications for a range of other troublesome syntactic problems.
In his *Quileute* (*HAIL, VOL III*), Manuel J. Andrade describes the Quileute prosodic system as having long and short vowels, and four tonal accents: high-falling, high, middle, and low.

Recent field work indicates that there is only one accent and that the many tonal patterns evident in the language result from the interaction of vowel length and a single accent. A small set of rules is given to specify the phonetic shapes of the various patterns. The Quileute prosodic system is somewhat complicated by the fact that morphological and syntactic processes influence both vowel length and placement of the accent.

Differences between Andrade's data and the author's may be due either to mishearing on the part of one of the investigators or to real changes in the phonetics of the language in the interval between investigations (1928 vs. 1968). The latter possibility cannot be overlooked, since the impact of English on the Quileute community has been very great during this period.
Traditionally, scholars who believe in a-umlaut of i have accounted for apparent exceptions like OE OS OHG fisk, ON fiskr (*piskos via *fiskaz), OE cwic vs. OHG quec (*g"iowos via *kwikwaz), and OHG gibizzan (*bbidono-) vs. gíbotan (*bbudhono-) by analogical explanations. The double outcome of i in the o-stem nouns is explained as due to paradigmatic leveling of umlauted and/or non-umlauted forms. The vocalism of participles like gibizzan is considered due to the analogy of the i-vocalism of the 3rd plural preterits of the type OHG bizzun.

This explanation has come under attack in a recently published article by Lloyd (Lg. 42.738-45). He points out that no e/i-alternation could have been phonetically conditioned in the Germanic o-stem paradigm, and he asks that if bizzun influenced gibizzan, why did butun not influence gíbotan? His conclusion is that PIE e (and not i) developed parallel with u. "a-umlaut" of i, where it seems to occur, is due to the analogy of the regular e/i-alternation in old e-roots in semi-paradigms like OHG fel 'skin' : fillen 'to skin' (PIE *pel(l)-) (whence X = nest : nisten).

Lloyd probably is right concerning the alleged e/i-alternation in the o-stems. But as far as the participles are concerned, he fails to consider the fact that the i-timbre of the present bizzan puts additional pressure on the replacement e → i, while the present corresponding to gíbotan, biotan (POmc. *beudana⁴), exerts no such pressure on the participle.

Lloyd is certainly wrong in assuming that PIE e (and not i) developed parallel with u: While the reflexes of e are quite "stable" (doublets like OHG weg : diot-wig 'public road' are rare), those of i and u are much less so (doublets like OE cwic : OHG quec, and OE wulf : OHG wolf are quite common).

While Lloyd's analogy (fel : fillen :: X : nisten) would account for the a-umlaut in OHG nest, and could thus account for doublets like OE cwic : OHG quec (through leveling, presumably), I fail to see how this analogy would work for (the absence of a-umlaut in) OE wulf.

Solution: Both i and u are assumed to have undergone a-umlaut. Ex-
ceptions like OE cwic and wulf can be explained by leveling in semi-paradigms like OHG quec : quicken 'vivify' (*kwikwaz : *kwik(w)jana*)
and OHG wolf : MHG wülpe 'she-wolf' (*wulfaz : *wulbi(z)).
Carleton T. Hodge, Indiana University
AFROASIATIC PRONOUN PROBLEMS

Two questions raised by the comparison of AAs pronouns are 1) to what extent may pronouns as units be reconstructed? and 2) to what extent are the forms analyzable into smaller units? The identity or near-identity of pronouns in widely separated members of the family strongly supports the effort to reconstruct whole pronouns. Diakonoff (1965, 1967) is representative of solid work in this area. On the other hand, fragmentation has had its proponents. Castellino (1962) is a good recent example. Despite von Soden's often justified criticism of Castellino (1965), the latter deserves credit for his willingness to consider radical solutions.

In a 1965 paper (unpublished) the present writer proposed an almost mechanical morphemic analysis of the AAs pronouns, the ultimate elements being 'deictic' (as others had previously hypothesized). Some of the implications of this view are: 1) the reconstructable pronouns are not 'personal' in the same sense as the historical ones, 2) the combinatorial possibilities of the morphemes involved are much greater than any pronoun paradigms would indicate, 3) this fluidity must be reflected in the reconstruction of the proto-language.

The possible relationship of such a system to IH must also be considered.
Arnold E. Horowitz, Hofstra University

BEFORE YOU CAN KNOW WHAT YOU ARE TALKING ABOUT, YOU HAVE TO KNOW IF YOU ARE TALKING ABOUT ANYTHING AT ALL - QUESTIONS AS TO WHETHER IT'S WORTH SAYING COME LATER

This rather verbose title is a highly elliptical statement of an essentially empirical, operationalistic, positivist, and pragmatic metamethodology which provides the framework within which the scientific enterprise operates in the Mid-Twentieth Century. Seemingly, the proponents of transformational grammatical theory have, directly or implicitly, criticized and disavowed most of the basic tenets of this generally accepted approach. In the controversies generated by this "revolution" in linguistic theory, there have been many accusations of "confusion" and "misunderstanding" from participants taking a wide variety of stands on the issues. I believe that there is ample justification for such accusations.

In their reaction - perhaps overreaction - to the emasculated version of "scientific" linguistics promulgated by Bloomfield (which in turn was probably an overreaction to the previous era of "mentalism"), the transformationalists seem to have lost some of the baby with the bathwater. Insofar as they have indeed given up the basic tenets of scientific method, the tremendously important contributions of the transformational approach, both in method and substance, is vitiated. To what extent this is so is currently ambiguous.

I will attempt to disambiguate with respect to the reliability and validity of introspective data; the distinctions between competence, performance, and acquisition models; and the place of an evaluative measure.
Although nonstandard dialects and their implications for American education are receiving much attention at present, there has to date been relatively little study of dialect problems in the Southeast, from either a pure linguistic or a sociolinguistic standpoint. Moreover, extant sociologically oriented treatments of child dialect have tended to focus either on the supposed inarticulateness and verbal nonfluency of the children, and their consequent inability to perform abstract thinking and to acquire a standard education, or else on certain features of the children's language which the investigators considered harmful or unaesthetic.

The present paper consists in an examination of a subset of what we term Black English, namely that spoken by Negro children in Southville County, a rural area of Northern Florida. It results from an investigation by the speaker, conducted under the auspices of the Southeastern Education Laboratory, a regional laboratory of the U.S. Office of Education. In contrast to previous treatments, the paper will not only discuss the linguistic composition of child Black English in this area, but will also put in perspective the broader significance of these children's language and verbal abilities. Topics to be covered include the use of different linguistic registers by a single speaker (the condition often mistimed 'bidialectism'), verbal art of the children, and the teaching of reading to speakers of nonmajority dialects. Examples will be presented on tape.
Some recent works on the structure of French bring new light to a recurrent linguistic controversy: whether a language can be said to have an overall structure, which in some way comprehends all of its diverse varieties. Schane has constructed a lucid scheme purporting to represent the deep structure of the phonology and morphology of French, in which rare and learned forms are accorded equal importance with commonly used constructions. Guiraud has presented the structure of substandard French as if it were a coherent system. Neither alone seems to be able to account for the actual language behavior of most French speakers.

It is here proposed that a "language" may not possess a single grammar, but rather a number of competing potential structures, no one of which in pure form can be posited as the competence of any speaker. The language behavior of a given person will represent a compromise among these, varying in accordance with his educational level and his acquaintance with other social and geographical dialects. In languages with an archaic spelling system and a conservative literary tradition in conflict with developing norms, the orthography helps to determine one form of the grammar: rather than reflecting the deep structure of the morphophonemic system, French (or English) spelling tends to shape it, in opposition to the tendencies of the spoken language, with which it must coexist in uneasy symbiosis.

Examples from many types of French (including overseas dialects) illustrate this conclusion, with special attention being given to liaison, unstable /ə/, and the verb system.
Makah, spoken at the northwestern tip of Washington State, is related most closely to Nitinat and Nootka, these making up the Nootkan branch of the Wakashan family. The glottalized resonants */w y m n 1/* must have been present in Proto-Wakashan and Proto-Nootkan, and all but */1/* are retained in Nootka. In Makah these consonants have lost their glottalization and merged with the reflexes of the corresponding non-glottalized consonants /w y b d 1/, but with compensatory lengthening of preceding vowels. This leaves traces in alternations of length in various parts of the morphology:

1) Suffixes beginning with the "hardening" morphophoneme, which condition glottalization of preceding voiceless stops, give rise to voiced consonants with lengthening of preceding vowels, whereas suffixes beginning with the "softening" morphophoneme, which have no effect on preceding voiceless stops, give rise to the same consonants, but without this lengthening.

2) Under certain conditions suffixes that began with one of these glottalized resonants condition lengthening of preceding vowels.

3) Some stems that began with a glottalized resonant condition lengthening of a preceding reduplicative syllable, but this effect survives only in the context of the generally irregular plural formations, and has been erased in the case of the more regular patterns of reduplication.

4) A few irregular allomorphs of stems show this lengthening.

The paper presents selected comparative data exemplifying these changes, and considers the extent to which these glottalized resonants might have been reconstructed from the evidence of Makah alone, in the absence of comparative data.
C. Douglas Johnson, University of California at Santa Barbara

SOME CONSEQUENCES OF A WEAK DISJUNCTIVE ORDERING PRINCIPLE

It is proposed that phonological rule schemata containing expressions of the form $X_n$ be expanded into an infinite set of rules that are disjunctively ordered in a weak sense that merely prohibits changing a particular segment more than once. Such an expansion principle permits the simple and natural formulation of such left-to-right and right-to-left processes as the alternating stress rules of many North American Indian languages, Havlík’s rule governing the fate of the yers in Slavic, vowel deletion in Yawelmani, and many others. Furthermore, it seems that it is never necessary in any phonological rule to use expressions of the form $X_n$ where $X$ denotes anything more complex than a segment type. A broad survey of languages has turned up no intractable counterexample to this apparent universal; the most difficult cases involve alternations that depend on an odd-even syllable or mora count, but even these are easily handled by positing an earlier alternating stress rule. None of these results would be possible if schemata containing $X_n$ expressions were expanded into a set of rules that were either simultaneously applicable (as lately proposed by Chomsky and Halle) or disjunctively ordered in any of the stronger senses that have appeared in the literature.
An experiment was conducted to gain an insight into the demarkative function of stress and intonation by testing the effectiveness of these features in resolving structural ambiguity. The responses of native speakers were analyzed both in the production and in the recognition of 68 pairs of potentially ambiguous sentences. Special care was taken to duplicate spontaneous language behavior by providing contextual clues for the identification of the constructions by the recording as well as by the listening informants.

The statistical analysis of the performance of the speakers and the listeners showed varying degrees of positive correlation between syntactic type and prosodic feature pattern, depending on the syntactic constructions involved. A closer examination of the phonetic, grammatical, and semantic nature of the tasks which the informants faced as well as the differences between the performance of speakers and listeners in the several categories suggested that some prosodic features have an inherently demarkative function, while others only incidentally; the latter being the manifestations of rules whose domains coincide with certain syntactic boundaries.
The etymology of risk involves a number of problems. Various previous explanations have to be rejected for phonological, morphological, or semantic reasons. On the basis of records so far neglected the term can be traced to the early Islamic domination of Egypt where it played as rouzikón a role in the tax system. Through Byzantine channels, rouzikón rizikón is transmitted to the West within the nautical terminology in two variants, a proparoxytonic, risicum, and a paroxytonic, riscum. Risk belongs to a group of words of various origins, which appear in Egypt, are first recorded in Hellenistic or Byzantine papyri, and are borrowed by the Western languages.
During the last two years, it has become evident that a number of syntactical problems, especially, definite noun phrases and pronouns, bring up intricate restrictions that involve the notion of coreference. Recent work on proposed rules of definitization and pronominalization has shown:

(1) The conditions under which these seemingly simple syntactical rules would operate are extremely complex, mysterious, and to some extent still unknown (e.g. see George Lakoff, "Pronouns and Reference", Harvard University 1968).

(2) In addition to restrictions that utilize the notion of coreference there also seem to be restrictions on coreferentiality itself that have to be expressed somewhere in the grammar. For example, although (i) does not violate any of the documented conditions on "forward pronominalization", it is semantically anomalous, since the two underlined noun phrases simply cannot refer to the same entity.

(i) *You must send a letter to her, because she is expecting the letter

This type of restrictions that depend on specificity, negation, modality, semantic class of the verb and the like obviously cannot be added to the already overcomplex structural conditions on anaphora. However, the distinction between these two kinds of restrictions is anything but clear. In fact, (i) seems anomalous exactly in the same way as (ii), although the latter is usually explained as a violation by a rule (attributed to Kuroda) that is given as a special syntactic restriction on "backwards pronominalization":

(ii) *Because she was expecting it, I sent a letter to her.

It will be argued that the study of semantical problems associated with the use of definite articles and pronouns in discourse will also provide us with a descriptively adequate solution to what at first seemed a bewildering variety of structural conditions on anaphora in compound sentences.
This paper discusses the nature of those phonological rules which MUST ALWAYS be applied by the native speakers of a language, however distorted their speech may be, due to overcarefulness. It has been suggested that phonetic performance rules are perhaps no more than simple allophonic rules: e.g. Greeks "cannot" pronounce velar [k] before front vowel in the same word, only palatal [ç]. While this suggestion is probably pointing in the right direction, it does not seem to be able to account for all cases. Thus, in languages where /i/ in certain environments has an unstressed variant [i] (or even obstruent [j]), how come native speakers sometimes pronounce syllabic [i] in the very same environments? This paper is an attempt to look into the meaning of statements like "Lilliputians cannot pronounce [g]." It does not purport to solve the problem of phonetic performance rules in a definitive fashion. For one thing, the evidence presented is strictly one-sided: distortions due to overcareful speech, occurring in a number of European languages. For another, the set of languages from which examples are taken is not terribly representative of the languages of the world. In other words, this paper is simply meant as a contribution towards the solution of this problem.
Four types of Korean verbs that are said to be irregularly conjugated are (1) p-irregular (e.g. chup-ta but chuw-a), (2) t-irregular (e.g. kat-ta but kar-a), (3) r̚-irregular (e.g. nar̚-ta but nal-a), (4) s̚-irregular verbs (e.g. nas-ta but na-a). The author attempts to show that what has been thought as lexically determined anomality in the quoted irregular verbs is nothing but a regular phonologically conditioned phenomenon. (1) and (2) are explained in terms of what the author calls "the principle of implosion" in Korean, which is a kind of articulatory habit that characterizes Korean in such a way that all obstruent consonants become implosives at syllable-final position before a consonant or a pause (i.e. all stops and fricatives become unreleased stops). If we extend this principle to obstruent approximants and posit chuW and kar (W, R = obstruent approximants) as underlying forms, W and R will become homorganic unreleased stops p and t respectively in syllable-final position by the implosion rule, but will become voiced w and r in intervocalic position by an independently motivated voicing rule, giving us chup-ta but chuw-a and kat-ta but kar-a. (3) and (4) are explained by positing new phonemes. In (3), it is argued that r in nari is actually l which is different from other r which has been thought to be the only liquid phoneme in Korean. Thus, nali-a → nal-a (prevocalic i is deleted by another independently motivated rule). In (4), it is argued that s here is a lax s, and other s in the language, a tense aspirated sh. This measure will fill a hole (n.b. pʰ pʰ, tʰ tʰ, cʰ cʰ, kʰ kʰ, and formerly sʰ sʰ, but now sʰ sʰ). Since all lax consonants in the language become voiced in intervocalic position (the former s (my sh) which was an exception to this rule is now no longer an exception), s of nas-a becomes s by this independently motivated voicing rule and s is then deleted to give na-a. Some both diachronic and synchronic evidence for the proposed new phonemes is given. It is claimed that the proposal brings much simplicity and generality to the phonological grammar of Korean.
In non-standard Negro English [NNE], there occur a number of negative expressions which appear to differ radically from other dialects in the relation of underlying meaning to the surface forms. Expressions such as It wasn't no trick wouldn't shun her have meanings contrary to those which would be attributed to them by other dialects: 'there wasn't any trick who would shun her' rather than '...would not shun her'. The inversion of tense marker and subject can be used with statements, rather than questions: Didn't nobody see it: didn't nobody hear it. When these expressions are viewed in the context of other standard and non-standard English dialects, they can be seen to be generated by contextual extensions of pandialectal rules for negative attraction and negative concord.

Four transformational rules apply to the negative after it is first placed in pre-verbal position. (1) The negative inversion rule which generates in literary English: Never did anyone hear the like, is adapted in NNE to generate: Didn't nobody hear it. (2) The negative attraction rule, as outlined by Klima, is obligatory for all English dialects: the negative is incorporated in the first preceding indefinite. (3) Certain formal dialects of English contain a negative transport rule which can move the negative optionally to the first following indefinite, as in He heard nothing. (4) Negative concord applies in white non-standard dialects [WNS] as a pleonastic rule distributing the negative optionally to any following indefinite. For some WNS dialects, this rule is extended to a following tense marker: Nobody didn't hear nothing. For NNE, the rule is further extended to become obligatory within the underlying sentence, and optionally to tense markers in other sentences, a possibility barred to WNS. Dialects of English are thus seen to be related by a gradual series of quantitative extensions of the contextual conditions governing the application of very general rules.
McCawley has argued that what Chomsky in *Aspects* called 'selectional restrictions' were really semantic and not syntactic constraints. Basically I agree with McCawley. However, I would like to point out that the oddness associated with a violation of a selectional restriction may vary from speaker to speaker due to different speakers' beliefs about the world.

For example, Chomsky sets up such syntactic features as CONCRETE, ANIMATE, and HUMAN. Who and what are usually assigned the features [+HUMAN] and [-HUMAN] respectively. Verbs like realize, believe, enjoy, etc. are usually said to take [+HUMAN] subjects. Thus:

\[
\begin{align*}
\text{realizes that I'm a lousy cook?} \\
\text{believes that I'm a fool?} \\
\text{enjoys watching me?}
\end{align*}
\]

But now consider:

\[
\begin{align*}
a. & \quad \text{My uncle} \\
b. & \quad \text{My cat} \\
c. & \quad \text{My goldfish} \\
d. & \quad \text{My pet amoeba} \\
e. & \quad \text{My frying pan} \\
f. & \quad \text{My sincerity} \\
g. & \quad \text{My birth}
\end{align*}
\]

(a) is certainly all right, as it should be. But according to the above hypothesis, (b)-(g) should be ungrammatical. I and many others find (b) perfectly all right, although some people do not. The reason, I think, is that I and those who agree with my judgment believe that cats have minds, while those who don't find (b) acceptable don't hold this belief. (c) and (d) are stranger, I think, because of the strangeness of the beliefs that goldfish and amoebae have minds. I would guess that someone who thought that his goldfish had a mind would find (c) perfectly acceptable. Similarly, if someone thought that his frying pan had a mind, he would find (e) perfectly all right. If one found such a person one might send for a psychiatrist, not try to correct his grammar. (f) and (g) are another matter. That properties and events could have mental powers seems to be an impossible belief, not just a strange one. If this is
true, it would follow that (f) and (g) are universally impossible, which I take to be the case. Thus, it seems that the subjects of verbs like realize, believe, enjoy, etc. are restricted to those individuals who the speaker believes have minds.

Other cases to be considered are:

I. The commitment of the subjects of certain verbs to certain beliefs.
   1. Max claimed that his toothbrush was pregnant.
   2. Max hoped that his toothbrush would be pregnant.
   3. Max wished that his toothbrush were pregnant.
   4. Max expected his toothbrush to be pregnant.
   5. Nixon and Humphrey claimed to be each other.
   6. Nixon and Humphrey hoped to be each other.
   7. Nixon and Humphrey wished to be each other.
   8. Nixon and Humphrey expected to be each other.

II. Beliefs and Identity Constraints.
   1. Willie Mays says that he is lurking outside his door.
   2. Willie Mays says that the second greatest home run hitter in history is lurking outside his door.
   3. Willie Mays says that, according to the centerfielder of the Giants, the second greatest home run hitter in history is lurking outside his door.

III. Other madness.
   1. The arm of the statue of Batman hurts.
   2. The bumper of the statue of the Batmobile hurts.

The consequences of these facts for the theory of transformational grammar will be discussed.
Transformational grammarians have believed for a long time that there is a rule of English which, in a few well-defined environments, (negatives, questions, conditions and comparatives), changes the indefinite some to any. (Cf. Klima, "Negation in English.") This rule, it is generally believed, operates obligatorily in most of these contexts, optionally in conditionals, triggered by a purely syntactic environment, and is independent of usage of the sentence: the change from some to any is governed by the presence of something identifiable in the surface structure.

But there are a number of situations where this is not true: where the presence of some or any is predictable on semantic grounds, not from superficial syntactic structure. Evidence for this claim comes mainly from conditional sentences, and partly from certain types of "yes-no" questions. The paper will discuss the ability to predict the distribution of some and any in the following categories:

I. True conditionals (where the speaker assumes no knowledge of, and has no emotional involvement in, the truth of the if-clause):
   A. Future and contrary-to-fact conditions.
   B. General conditions.

II. False conditionals (where the speaker assumes, or hopes for, the truth or falsity of the if-clause), and related types of questions:
   A. Threats
   B. Promises
   C. Rhetorical questions, invitations, polite requests.

The distribution of some and any in category I involves the notion of presupposition: if the speaker presupposes that the indefinite noun in the if-clause actually exists, then some is the only possibility. If the speaker is neutral in this respect, any is found instead. In general conditions, this distinction takes the form of the closely-related concept of logical subject. Examples can be given, first of Type A then of Type B.
1. If John sees some unicorns, I'll be amazed - I know unicorns don't exist but 2. If John sees some buffaloes, I won't be surprised - he's in Wyoming, isn't he?

3. If Mary sees someone, she runs away. but 4. If Mary sees anyone, he tries to escape.

In the second category, different factors govern the distribution of some and any - an indication that these sentences are, in fact, different in their underlying forms from the true conditional and interrogative structures that they superficially resemble. Whether the action of the if-clause is seen as a favorable thing by the speaker (as with promises) or unfavorable (as with threats) determines here whether some or any occurs. This fact will provide additional evidence in support of performative abstract verbs. Similarly, in rhetorical questions, invitations and polite requests, where a yes answer is anticipated, some alone is permissible - as is not the case in regular yes-no questions.

Examples like these illustrate these contentions:

1. (threat) If you eat some candy, I'll whip you. any
2. (promise) If you eat some spinach, I'll let you have dessert. *any
3. (rhetorical question) Class, do you want to do some arithmetic now? any
4. (a question, not a request or suggestion) John, do you want to do any work today? some
5. (invitation) Would you like some candy? *any
6. (where hospitality isn't involved) Would you like any old clothes?
7. (request) I wonder if you'd lend me some money. *any
8. (indirect question, not a request) I wonder if Sam will lend Bill some money.
A number of syntactic rules are discussed and shown to be "mirror image" rules--rules equivalent to two component rules that are mirror images of one another. It is then observed that similar mirror image properties can also be found in the lexical and phonological domains of natural language. Some theoretical consequences of these observations are briefly discussed.
As is well known, a modal auxiliary cannot occur in an infinitive:

1. *John hopes to find enjoyment in his new job.

where M is any of the modals can, could, may, might, must, ought to, shall, should, will, would. The problem dealt with here is the description of the mechanisms necessary to exclude modals from infinitives.

One mechanism is the transformation itself which forms infinitives out of finite clauses; this rule is capable of deleting a modal from those clauses:

2. I expect John to find enjoyment in his new job.
3. I expect that John will find enjoyment in his new job.

But not all infinitives come from finite clauses containing modals:

4. John seems to find enjoyment in his new job.
5. It seems that John finds enjoyment in his new job.

Since modals are not excluded from finite clauses, a problem arises in dealing with a verb, such as tend, which occurs obligatorily with infinitives. A sentence such as:

6. *John tends that he can antagonize his teachers.

is out because infinitivization has not been applied, whereas:

7. *John tends to can antagonize his teachers.

is ungrammatical because the infinitive contains an undeletable modal.

I contend that the deep structure underlying (6) is well-formed, and that infinitivization is allowed to apply to it; (7) is then ruled out by an output condition to the effect that a modal cannot occur in an infinitive in English. Independent evidence is furnished by the following examples; (8) becomes (9) by infinitivization, and (10) results from a rule which raises the modal to the main clause.

8. It seems that John can't find enjoyment in his new job.
9. *John seems to can't find enjoyment in his new job.
10. John can't seem to find enjoyment in his new job.
Puerto Rican Spanish did not pass through a pidgin stage as is postulated for Jamaican Creole and Haitian Creole. The reason suggested is that Spanish colonial policy toward African slaves in Puerto Rico was radically different from that of the English and French in their possessions. Although Africanisms and Taño Indian place names remain in Puerto Rican Spanish, they form no integral part of the lexicon or structure. In contrast, Spanish and English, which have been in contact in Puerto Rico for over seventy years, result in a dialect which has hispanicized lexemes from English semantically different from the original items. In addition, the sociolinguistic context determines dialectal choice. The morphology of this 'contact' dialect includes many free morphemes adapted from English but with Spanish shapes. The syntax increasingly resembles the pattern of American English.

It is suggested that an examination of this dialect from a linguistic, semantic, and sociolinguistic view will provide substantive evidence of the process of creolization at work rather than the transformation of a pidgin into a creole as defined by Bloomfield (1933:474).
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THE SUBJECT OF CAUSE

It has been assumed for a long time that the by-phrase of the passive represents a deep structure subject. For example in The minister was murdered by Felix, Felix is the deep structure subject of murder. I will show that certain other by-phrases represent deep structure subjects. In particular, the by-phrase in John caused himself to collapse by eating too much is the logical subject of cause. Note the paraphrase John's eating too much caused him (John) to collapse.

There is an optional rule, then, which separates John from its verb phrase eat too much. This separation can be accounted for in the same way as the separation of it and rain in It seemed to be raining.

It seems natural to extend this treatment to John caused himself to collapse, since this means the same as John caused himself to collapse by doing something, or John's doing something caused him to collapse. That is, the animate subject of cause is a reduction of a sentence with an unspecified verb in deep structure.
Phonologic features obviously must have a concrete basis in the sound pattern of a language and there has been much work on both the acoustic correlates of phonologic features and the articulatory apparatus that is used to generate speech. In many of these studies there has, however, been an implicit assumption that it is possible to find some one-to-one mapping between the phonologic features and invariant acoustic, articulatory or motor correlates. This sort of simple one-to-one mapping between a feature and its physical attributes has, in general, proved unmanageable. We instead propose that a phonologic feature is a signalling unit that represents a match between the constraints imposed by man's auditory system and man's vocal mechanism. The ensemble of phonologic features thus consists of articulatory maneuvers that are easy to execute which have acoustic correlates that can readily be perceived and differentiated. The hierarchy of features will be structured in terms of the features that best meet these two criteria. Obviously some features will be easier or "simpler" to articulate than others. Other features may be harder to articulate though they may have more readily perceptible and identifiable acoustic correlates. The stablest and most "central" features would be those that best meet both criteria. Note that we are not equating features to either invariant binary muscular commands nor to invariant acoustic correlates. We specifically do not want to imply that there is a one-to-one mapping between the set of features and particular articulatory structures or muscles nor do we wish to take the position that the motor commands associated with the articulatory correlates of a feature are always "all or nothing" binary instructions or that the same muscles are always involved in the articulatory implementation of a feature. A feature always has two aspects, its acoustic and perceptual side and its articulatory aspects and the set of features, in effect, may represent a long process of human evolution towards optimal use of the characteristics of the peripheral speech output and input systems.
Leigh Lisker, Haskins Laboratories and University of Pennsylvania
Arthur S. Abramson, Haskins Laboratories and University of Connecticut

DISTINCTIVE FEATURES AND LARYNGEAL CONTROL

In The Sound Pattern of English Chomsky and Halle provide a revised set of distinctive features intended to be adequate to the phonological components of all languages. In this paper attention will be focused on a group of those features -- tenseness, voicing, heightened subglottal pressure, and glottal constriction -- said to distinguish, singly or in combination, homorganic stop consonants in a number of languages. The implication is that they are independent phonetic dimensions; nevertheless in English and certain other languages these dimensions clearly do not operate independently. The linguist's desire for the simplest possible description leads him to attribute distinctiveness to some one dimension, and a subsidiary or redundant role to the others. Physiological and acoustic data, as well as perceptual experiments, support the view that the timing of events at the glottis provides a simplifying explanation of the features under discussion, even if in some other languages, e.g. Korean, the independence of at least one additional feature seems likely. Presumably other phonological units requiring complex phonetic specification may be referred to relatively simple underlying mechanisms on the basis of detailed matching of the speech signal to the anatomy and physiology of the vocal tract.
In his 1958 textbook, Hockett distinguished two types of grammatical concord: concord proper, in which the agreeing items share a grammatical category, e.g. number, case; and governmental concord, in which the class membership of a governing item controls the occurrence of a category in the governed item. This distinction has been widely ignored since its publication, particularly by transformationalists, who have treated both types of concord as the copying of a category from one independent item onto one or more others via transformation.

This paper is intended to show that this distinction is in fact a very natural and valuable one for many languages, and that it can be readily captured by the stratificational model of linguistic structure, as presented in Lamb's *Outline of Stratificational Grammar*. In illustrating this point, the gender, number, and case concord exhibited in the Czech noun phrase will be treated in terms of a stratificational lexotactics. It will be shown that gender concord is fundamentally different from the other two, in that it is a governmental concord, while the others are examples of concord proper.

It will be further suggested that gender concord is quite commonly a matter of governmental concord, especially in the Indo-European languages, while the concord of number and case is more likely to exemplify concord proper.
A limited problem of pronominal reference in English discourse—that of three individuals in conversation with each other—has been formalized and treated by the use of mathematical permutation groups, and the pronominal references have been exactly determined within the chosen limits of the problem, specifically:

(i) In the simple problem of reference—the monologue—where one member of the trio holds the floor, any utterance spoken by him can be indexed to one of six possible group operators, viz., the operators of the symmetric group $P_3$ of permutations of three objects.

(ii) From this, we can regard a more general conversational interchange between three individuals as a succession of monologues with correct, well-defined rules of sequence, telling us which are the possible shifts of person role and the conditions under which such shifts are permitted.

(iii) The pronominal reference problem in a quotation content (e.g., "I saw you") which is itself embedded generally in a string of $N$ quotation margins (e.g., in $N = 2$, it might be 'I said to him: "He said to you: "I saw you."" ') is resolved by a general theorem which, in effect, reduces the solution of the pronominal reference problem for a series of $N$ embedded quotation margins, to the problem of one single quotation margin.

In the treatment, sociological relevance has been sought for at each step of the formal arguments.
Recent theoretical proposals concerning the base component of a transformational grammar are presented and critically examined—in particular, the concatenative theories of N.A. Chomsky and J.D. McCawley and the combinatory theory of S.K. Šumjan.

Fundamental to concatenative conceptions of the base is the assumption that linear ordering is a formal property of deep structure. Šumjan and other proponents of the applicational generative model, on the other hand, maintain that linear ordering is a phenomenon that belongs to surface structure. According to this latter proposal, dominance relations define grammatical functions independently of linear ordering.

Šumjan's claim that grammatical functions are defined in terms of dominance is accepted and it is maintained that linear ordering is an essential feature of deep structure only when it is functional. Interestingly enough, no natural language examples of the latter theoretical construct have been found.

The paper concludes with a statement of what we currently consider the most adequate theoretical framework within which grammatical studies may be undertaken. The examples cited are in Maltese Arabic.
Certain Romance derivational suffixes (e.g., -esse in French fin-esse) appear in a single, isolated form; others, like Italian -atto, -etto, and -otto, form clearly delineated clusters, in which one can distinguish vocalic gamuts of varying length (say, a -- e -- o) and consonantal pillars or anchors, which in turn may involve simple consonants, short or long, or groups of consonants of varying configuration. Important for the diachronically oriented linguist are questions such as these: Can one vocalic gamut, inherited from the ancestral language, readily serve as a prototype for other such gamuts? Assuming that one consonantal pillar has been too heavily exploited, can speakers be expected to try to switch to another such pillar, not yet pressed into service -- and, if so, under what conditions? Specific illustrations will be provided from Asturo-Leonese dialects, and the problem of "empty cases" in suffixal systems will be broached.
In a synchronic analysis of Tiberian Hebrew morphophonemics, several seemingly disparate vowel alternations may be described in terms of a 'flip-flop rule' (cf. Wang, *IJAL* 33 [1967] 102) to the effect that in closed syllables both unstressed $a \rightarrow i$ (e.g. *gazrf* 'my carrot' $\rightarrow$ *gizrf*) and stressed $i \rightarrow a$ (e.g. *zibbánti* 'I have sold' $\rightarrow$ *zibbánti*).

Although the relevant alternations are describable by one rule, formulated in terms of binary features and variables over such features, there is sure external and comparative evidence to the effect that the two historical changes homologous with the rule’s two components took place several centuries apart. Internal reconstructive evidence is adduced corroborating this discrepancy between synchronic ordering and diachronic succession.

In addition to discussion of the synchronic rule and of its relation to its homologous pair of sound changes, some interesting morphological repercussions of the changes are examined, and an attempted phonetic explanation of the changes is offered.
This study examines the pronunciation characteristics of Negro and white children from different socio-economic classes in Gainesville, Florida. As expected there are significant differences between the white and Negro children. However, all of the Negros and the higher whites produce both "General American" and "Southern" dialect pronunciations. Only the lower white children do not deviate from a "Southern" dialect.

This study also examines the pronunciation characteristics of the higher and lower socio-economic classes within both the Negro and white groups. There are no significant differences between the High and Low Negro groups. However, the pronunciation of five vowels differentiate the High and Low white groups. This result supports the hypothesis of greater dialect cleavage between socio-economic classes within the white community than in the Negro community.

The Negro children shared two pronunciations with the Low white children. The High white pronunciations are "General American," while the Low white and Negro groups give "Southern" pronunciations. In this respect, the Negro children and the Low white children are distinguishable from the High white children.

These results indicate the need for more intensive dialect investigations. It may be that there are vast dialect cleavages (or similarities) between both Negroes and whites and the socio-economic classes within these ethnic groups in different geographic areas. This information is a fundamental prerequisite to any "remedial" measures taken in the schools.
A system has been developed at Haskins Laboratories for synthesis by rule—the automatic generation of speech from an input string of phonemic symbols and prosodic marks. The system consists of a laboratory computer, a resonance synthesizer and a program which calculates control values for the synthesizer according to a table of rules. The experimenter can type a phonemic transcription and hear the corresponding utterance immediately.

The rules provide for the steady states and transitions of segmental phonemes, for the acoustic correlates of stress and intonation and for allophonic variations. In principle, the system allows the synthesis of many languages, since the rule table for a particular language is an auxiliary input to the program. Thus far, General American English and Southern British English have been synthesized.

Synthesis by rule is of linguistic interest because the rules are equivalent to a rigorous description of the phonology of the language being synthesized. The acceptability of the synthetic speech to a native speaker of the language is a measure of the adequacy of the description, and the simplicity and elegance of two such descriptions can be explicitly compared.

A demonstration tape-recording will be played.
Some sample input strings for the "Rules" program.
This paper presents the following evidence that the superficial Subject-Verb-Object word order of English arises by a transformation from an underlying constituent order in which verbs (or more correctly, predicates: the representation under discussion here is a semantic representation in which noun, verb, adjective, conjunction, etc. are undifferentiated) occur at the beginning of the clause:

1. In virtue of Lakoff's observation that cyclic transformations give as output structures of the same gross shape as those generated by the base component, underlying VSO order would require that VSO order be maintained throughout the cycle. Having VSO order in the inputs to all cyclic transformations in English not only does not introduce any new complexity into the rules of the cycle but indeed makes it possible to formulate them without recourse to any of the following highly questionable devices, all of which are necessary if there is underlying SVO order: 'curly brackets', multiple structural descriptions for a single transformation, and transformations that perform more than one elementary operation.

2. The assumption of underlying VSO order for all surface SVO languages allows an explanation of Ross's observation that in SOV languages conjunctions are postposed to each conjunct but in SVO and VSO languages they are preposed to each conjunct; together with the conclusion that auxiliary verbs are verbs which have sentence complements, it provides an explanation of why auxiliaries precede 'main verbs' in SVO and VSO languages but follow them in SOV languages.
Linguistic analysis of poetry has legitimately concentrated on basic linguistic features, excluding most of the techniques of the literary critic. Such features are: rhyme, rhythm, phonemic interplay, syntax (often from a transformational point of view), "grammaticity," and the coincidence of linguistic and literary structure (e.g., A.A. Hill's "microliterary level" or Samuel Levin's "couplings"). Their mere presence, however, does not guarantee a good poem; in fact, linguistic criteria alone cannot determine whether these features have been handled skillfully. Furthermore, these very features are either absent from, or of limited importance in some types of contemporary verse. Samples from the Beat and "Black Mountain poets and from Marianne Moore can be cited in evidence. Such poetry, if it does not depend mainly on these formal features, must by elimination depend on meaning in its broadest sense ("foregrounding of meaning," in Prague School terminology), and this at present is not easily amenable to linguistic analysis.
Recent studies have stressed the importance of "exotic" languages such as Eskimo as a testing ground for new grammatical descriptions and proposals for automatic syntactic analysis. The present paper aims at unifying some of the issues that have been raised in this connection, such as syntactic reference, relative and absolute case.

It is shown that a proper treatment of these problems presupposes a correct analysis of the Eskimo verbal forms. In particular, relative case cannot be separated from transitivity.

A transformational approach is outlined which explains all the occurrences of relative case by assuming a particular deep structure expansion of the intermediate node "transitive verb". In this way, a natural explanation is obtained not only of relative case, but also of the occurrence of "third" versus "fourth" (=reflexive third) referential person suffixes in Eskimo verbal forms.
Sapir's treatment of the Southern Paiute phonological system, first in his *Southern Paiute Grammar*, then later in an article on "The Psychological Reality of Phonemes," has become famous in the linguistic literature. Of interest is the three-way development of consonants, which become spirantized, geminated, or prenasalized in medial position. There have been two recent restatements of Sapir's phonology utilizing a distinctive feature approach, one by Robert T. Harms (IJAL 32:228-235, 1966), the other by Jean H. Rogers (IJAL 33:198-205, 1967). It is my contention that the wrong distinctive features have been set up by both authors. Rather than reanalyze Southern Paiute again, I will discuss this aspect of Shoshoni phonology, a closely related language which differs in detail from Southern Paiute, but which presents the same sets of problems.

Chomsky and Halle in their recent publication "Sound Pattern of English" consider the problem very briefly. Their approach to the problem is very similar to mine.

The problems are of interest not only in terms of phonologic theory, but also from the perspective of comparative Numic and comparative Uto-Aztecan.
There have been recent modifications in the theory of generative syntax, due to, among others, McCawley, Lakoff, Ross and Postal, in regard to reference, the place and function of the lexicon, and the nature of the relationship between syntax and semantics. The purpose of this paper is to show how these modifications provide a framework for discussing and investigating the notion "possible lexical item" both in language-specific and in universal terms. In particular, it is claimed by the author that there are restrictions on the form and content of the semantic representation of simple lexical items such that items like, for example, "mank", meaning "every broken", as in "The police inspected mank window" and "glap", meaning "to break one's arm during", as in "Harry glapped January", can never occur in any natural language. It is shown that the proposed modifications predict the non-occurrence of lexical items like these and other types, and in effect provide a characterization of the set of possible lexical items. But it is also shown that further restrictions are probably necessary; for example, that the semantic representation of a lexical item cannot include a referential index.
A STAGE IN THE ACQUISITION OF ENGLISH PHONOLOGY

The phonologies of three English-speaking children at approximately two years of age are examined. Two of the analyses are based on published studies; the third is based on observations and recordings made by the author. Summary statements on phonemic inventories and on correspondances with the adult model are presented. For the third case, fairly detailed phonetic and distributional data are also utilized. The paper attempts to draw conclusions about typical difficulties of phonological development at this stage and possible strategies used by children in attaining the adult norms.
This paper proposes a reanalysis of the English modal auxiliary system. Various semantic and syntactic peculiarities of the epistemic and root modals are discussed. Evidence is presented that epistemic modals are intransitive constructions (as has been suggested by John R. Ross) and root modals are complex causative constructions in which the epistemic intransitive is embedded in a causative verb.

Semantically, root modals behave as epistemic modals with a causative interpretation. For example, epistemic may and can both mean "possibility" in various senses. Root may means to cause to be possible in another way or to "allow". Root can means to cause to be possible in a certain way or to "enable". The causative interpretation also affords an explanation of the complementary distribution between the root modals and certain true verbs or "modal suppletives". The suppletive relation between must and require is an example of this. The inability of the suppletives to take identical subjects and objects follows logically from the fact that the same restriction applies to causatives when modals are embedded in them. The ungrammaticality of "I made myself have to go" illustrates this point. Also, the modal suppletives and causatives may both appear in deep structural indirect object configurations or in direct object configurations only. While this fact alone would lend support to the theory that there is an underlying unity between them, the fact that the selectional restrictions which they exhibit (in terms of active and stative verb cooccurrences, animate and inanimate subjects, etc.) are identical, makes the proposal even more convincing. A final argument for the association of causatives and root modals is derived from the fact that two verbs, let and have, may behave either as causatives or as modal-like verbs.
This paper will maintain the following propositions:

1. That there are no unambiguous markers, overt or covert, which can be said to distinguish subordinate and non-subordinate clauses in Germanic.
   a. All other Indo-European language groups use a specific set of pronouns and conjunctions to indicate which of a set of clauses is subordinate in sequence. Germanic is unique in using the IE *to- stem, the demonstrative, to head all the clauses in a sequence, including those which would commonly be translated as subordinate.

2. That the internal evidence of the Germanic languages shows that the proto-language had two means of marking the degree of sequentiality in successive clauses, namely, verb-final word order and a pronominal case form suffixed to the demonstrative:
   a. Old English: Verb final word order in OE is associated with the following constructions: Time sequences (when..., then..., etc.); Causal sequences; Negative correlatives (neither..., nor...); Successive sentences where the noun subject of the first is the same as the subject of the second which may show up as a pronoun or as Ø.
   b. Gothic: The Greek subordinating conjunctions are sometimes translated by plain demonstratives, tho more frequently the suffix -ei is used for this purpose.
   c. Old High German: In the earliest texts, the plain demonstrative may have a relative meaning.
   d. Old Norse: Demonstrative pleonasm.
Transformational theory has from the outset emphasized the need to distinguish the superficial syntactic structure of a sentence from a more abstract representation of that structure. As an example, Chomsky has often claimed that an important traditional distinction between "logical" and "grammatical" subject is captured by the transformational distinction between "deep" and "surface" subject. The deep and surface subjects (of the main clause) would be said to coincide in (1) and (2) below, but to differ in (3) and (4):

1. John is afraid to speak up
2. The ice has begun to melt
3. That violin is easy to play
4. This company is run by amateurs

In (3), the deep subject would be the structure underlying "(for someone) to play that violin"; in (4), "amateurs."

Recently, however, Ross, Lakoff, Perlmutter, Kiparsky and others have found strong arguments that lead to quite different choices of deep structure subject in certain cases. For instance, the judgment of identity of deep and surface structure for (2) and (3) has been reversed. But some of the original arguments present problems for the new choice of deep subject. In particular, a number of the strongest arguments both for and against calling the surface structure subject the deep structure subject apply to sentences like (5) and (6):

5. The baby appears to be asleep
6. Charley is certain to win

It is maintained in this paper that both sets of arguments are "right", and that the resulting paradox stems from certain fundamental inconsistencies in the significance attached to deep structure constituents. Some possible approaches to a resolution will be suggested.
Gradualness of sound-change has been frequently assumed as a universal (or near-universal) feature, and has, except for its spread, also been vigorously denied. The evidence adduced consists mostly of considerations of phonological theory and dialectal geography. Can the analysis of specific historical sound-changes contribute to the argument? This paper will take up the question in regard to the "i-umlaut" which involved all velar vowels of Old High German including a.

Frequently attempts have been made to set up intermediate stages, e.g. centralized vowels; diachronically differing effects of /i/ and /j/; sequences of periods with and without umlaut. Other assumed steps from, e.g. aci > eC̆ include:

A: [a] > [m] > [ɛ] > [ɛ] (increase in assimilation of velar vowel)
B: [a] > [ai] > [ɛi] > [ɛ] > [ɛ] (epenthetic intrusion)
C: aci > ac'ei > sc'ei > sc'ei > eC̆ > eC̆ (consonant palatalization)

Type A is usually assumed for B, C; also B together with C. The evidence supports allophonic variation of /a/, determined also by consonantal environment and junctural features, preceding the merger and a later split: OHG /a/ in maht [a], mahti [m]; MHG maht /a/, mähte /m̩/.

OHG /e/ in gesti [e], nest [ɛ]; MHG geste /e/, nest /ɛ/ (ü)

Descriptions of the merger to /e/ will differ depending on whether consistent gradualness is assumed or not. The sound-change offers evidence for intermediate steps but cannot be used to prove or disprove occurrence of infinitesimal, gradual stages. Or do recoverable relatively major steps presuppose the existence of unrecoverable minimal steps?
ON THE NON-EXISTENCE OF CARTESIAN LINGUISTICS

It is important that linguists not be misled by some of Chomsky’s recent monographs into believing that he has successfully demonstrated the existence of an intellectual movement which could be designated by the term Cartesian Linguistics. Readers should be put on their guard against such a misconception on the following grounds:

1. Chomsky has so far failed to produce a single piece of genuine historical evidence to show that Descartes had any influence whatever on the seventeenth century universal grammarians.

2. More and more evidence is accumulating which leads one to conclude that universal grammar was a viable intellectual movement all over western Europe before Descartes’ works began to exert any influence.

3. The ascription to Descartes of a belief in what Chomsky calls "the creative aspect of language use" rests on a questionable interpretation of the text.

4. There is no necessary logical connection between a belief in the creative aspect of language use and the belief that language has an outer and an inner structure. Hence even if Descartes believed in the first there is no a priori reason to suppose that the grammarians Chomsky pictures as being influenced by him should necessarily believe in the second.

So far, therefore, Chomsky’s historiography is almost entirely of the retrospective variety and its putative results should be regarded with a healthy skepticism until he comes forward with more solid documentary evidence.
Data from a number of dialects of Pennsylvania German (PG), spoken in Virginia, West Virginia, Oklahoma, and Kansas, are examined, and it is found that these dialects tend to retain certain features no longer present in the dialect(s) of Pennsylvania. This study is based on data gathered during the last three years in the four states mentioned.

The retention of front rounded vowels in some of the dialects is discussed. Where these phonemes have been retained, the phonetic degree of lip rounding varies noticeably from one dialect to another. It is possible to rank the degrees of lip rounding in PG on a scale, ranging from a (hypothetical) maximum degree of rounding in the dialects of at least some of the early speakers of PG, to a zero degree of rounding, characteristic of most present-day dialects of PG. At least two degrees of rounding represent intermediate stages of what appears to be a "gradual sound change".

An attempt is made to account for the loss of the front rounded vowel phonemes of PG, not by the deletion of a phonological rule, but rather by the failure of speakers of PG to implement a rule, the rule directing speakers to round their lips while articulating certain vowel sounds. It is felt that the resultant sound change has taken place gradually, over a period of at least two centuries, and has proceeded at a more or less rapid rate in the various dialects of PG. The gradual failure to implement a phonological rule appears, in this case, to have resulted in the eventual loss of the rule itself, and to have caused the disappearance of front rounded vowels from PG.
A two register vowel system, based primarily on syllable initial consonant(s), developing into an eight tone system, is an areal feature found in the following Asian language families - Chinese, Tai, Miao-Yao and Mon-Khmer (as represented by Vietnamese). Tibeto-Burman languages seem not to have had this development. Clearest evidence of this development is the Vietnamese tone system arising from the two vowel registers found in present day Cambodian and Mon and other Mon-Khmer languages. Each of the two registers give rise to a set of four tones in Vietnamese. One member of each set is stopped. Each member of one set has a corresponding member in the other.

Conclusive, but not nearly so extensive as the Vietnamese, is the evidence found in the relationship of initial consonant to tone in Chinese, Tai and Miao-Yao. Through the alignment of tone systems, i.e. Vietnamese and Sino-Vietnamese; Sino-Vietnamese and Chinese languages; Chinese and Sino-Chuang; Chuang and Tai languages; early Chinese loans into Yao and Yao; Yao and Miao-Yao languages, it is possible to set up a table of eight positions on which it is possible to plot the tone systems of all of the languages and dialects in the language families cited above.

Tone changes in the above languages, through morphological processes or the splitting, coalescence or expansion of single tones or in early borrowings from Chinese can be charted on the table in regular, symmetrical patterns.

Tone contour and tone sandhi are not relevant to this paper.
The reasoning that has led transformationalists to conclude that natural language cannot be produced by a finite state device can be shown to be based on some fallacious assumptions. The acceptance of these assumptions and the 'proof' based on them has resulted in a system which is inherently too powerful. Some of the problems which this has caused are discussed. An alternate solution is proposed, based on a distinction between two types of generative mechanisms - iteration and recursion. A finite state device can use iteration to produce arbitrarily long sentences. A device which employs recursion is finite if and only if the depth of the recursion is strictly limited. A device which employs iteration plus recursion to a depth of one is thus a finite device. This paper contends that such a device is adequate to describe the data of natural language. English constructions, particularly embedded relative clauses, will be analyzed from a transformational and a stratificational point of view. This paper explains how the proposed device produces just those complex sentences which are acceptable, and how this finite system is naturally representable in terms of relational networks. In contrast, transformational analysis of the same constructions requires recursion to an arbitrary depth; i.e. a nonfinite system. The proposed solution also handles multiple branching constructions such as are found in coordination, and explains the intonation pattern of sentences containing strings of relative clauses.

The paper concludes with a discussion of language behavior which cannot be described with a finite system. Examples include reference and definition in discourse analysis, and language learning.
A structure-free dependency grammar is uniquely restatable as a special phrase-structure grammar in which every expansion rule contains a unique occurrence of a marked, differentiating, terminal category. In dependency terms, that occurrence 'governs' the others; informally, it is the 'head' of the construction.

The concept of 'head' is not formalized and is perhaps not formalizable within the framework of phrase-structure theory alone. Nevertheless, it is frequently invoked in accounting for transformations. This suggests that it was premature to choose phrase-structure generative rules as the form for the categorial component of transformational grammars, and that a dependency form is superior. A crucial point is whether or not a structure-free categorial component is adequate. Evidence is presented indicating that it is.

If so, dependency rules are preferable. Because they are restatable as phrase-structure rules, transformations are definable on the structures they assign in the forms currently used for transformational rules. Transformations are also definable on pure dependency structures. In either case, additional information identifying the 'head' is supplied. One advantage of using dependency descriptions of structure is that the problem of 'pruning' inappropriately labelled or vacuous nodes created by transformations is avoided.
HANDOUT
Dependency Structures and Transformations

1. Dependency characterization
   (i) in every string one and only one element governs all other elements directly or indirectly;
   (ii) all other elements depend directly on some element;
   (iii) no element depends directly on more than one other element, although it may govern more than one; and
   (iv) if A depends directly on B and some element C intervenes between A and B, then C depends on B directly or indirectly.

2. Definition: A PSG is structure-free if (i) the set of 'words' assigned to any terminal category contains at least one member not included in any set assigned to another, and (ii) every replacement string for any non-terminal category X contains an occurrence of at least one category that (a) occurs only once within any replacing string for X, (b) does not occur in the replacement strings of any other category, and (c) is not the 'distinguished' (initial) symbol.

3. Definition: A DG is structure-free if (i) the set of 'words' assigned to any category contains at least one member that is not included in any set assigned to another, and (ii) any rule assigning dependents to a category is applicable to the category wherever it occurs, and (iii) the type or number of direct dependents assigned on one side of a category is not contingent on the type or number assigned on the other.

4. (a) \# S \#  
    S \rightarrow a \, S \, a  
    S \rightarrow b

   (b) *(a)  
        a (* a) except when governed on the left
   *(b)  
        a (a *) when governed on the left
        a (b *) when governed on the left
        b (*)

   (c) *(A)  
        A (* C) A:{a}  
   *(B)  
        C (A *) B:{b}  
        C (B *) C:{a}  
        B (*)

[87]
5. (a) $S \rightarrow B$
$S \rightarrow BC$
$C \rightarrow A$
$C \rightarrow CA$

T Rule: $B C \Rightarrow 2+1 2$

(b) $B (*)$
$B (*A)$
$A (*A)$
$A (A *)$

T Rule: $(B * A) \Rightarrow 2 1 2$

6. $T (N* V)$
$V (* [N [T]])$
$N (* [T])$

T $\rightarrow$ N $T* V$
$V \Rightarrow V* (N (T))$
$N \Rightarrow N* (T)$

7. $N^1 + -S = N^2$
$T N^2 = N^3 \Rightarrow \rightarrow NP \rightarrow T N$
$N^3 P N^4 = N^3$
(Harris)

8. $A \rightarrow (X) A (Y)$
$B \rightarrow (X) B* (Y)$
9. (a) \[ S \rightarrow \overline{N} \overline{V} \]
   \[ \overline{X} \rightarrow [\text{Spec}, X] \overline{X} \]
   \[ \overline{X} \rightarrow X \ldots \]
   (Chomsky)

(b) \[ S \rightarrow N^4 V^4 \text{ Intonation} \]
   (Harris)

10. The "Revolutionary" Constraint

If, in any deep or derived structure, an occurrence A governs an occurrence B directly or indirectly, then no transformation will effect a structural change in which occurrence B governs occurrence A directly or indirectly.

11. (a)i

   \[
   \begin{array}{c}
   \text{Art} \\
   a
   \end{array}
   \]

   \[
   \begin{array}{c}
   \text{Postart} \\
   \text{S}
   \end{array}
   \]

   \[
   \begin{array}{c}
   \text{NP} \\
   \text{Det}
   \end{array}
   \]

   \[
   \begin{array}{c}
   \text{N} \\
   \text{be}
   \end{array}
   \]

   \[
   \begin{array}{c}
   \text{Adj} \\
   \text{which}
   \end{array}
   \]

   \[
   \begin{array}{c}
   \text{yellow}
   \end{array}
   \]

   \[
   \begin{array}{c}
   \text{VP}
   \end{array}
   \]

   \[
   \begin{array}{c}
   \text{Aux}
   \end{array}
   \]

   \[
   \begin{array}{c}
   \text{NP}
   \end{array}
   \]

\[ \Rightarrow \]

(b)i

\[
\begin{array}{c}
\text{Art} \\
\text{a}
\end{array}
\]

\[
\begin{array}{c}
\text{N} \\
\text{be}
\end{array}
\]

\[
\begin{array}{c}
\text{Adj} \\
\text{which}
\end{array}
\]

\[
\begin{array}{c}
\text{yellow}
\end{array}
\]

\[
\begin{array}{c}
\text{cat}
\end{array}
\]

\[
\begin{array}{c}
\text{VP}
\end{array}
\]

\[
\begin{array}{c}
\text{Aux}
\end{array}
\]

\[
\begin{array}{c}
\text{NP}
\end{array}
\]

\[ \Rightarrow \]

(ii*)

\[
\begin{array}{c}
\text{Art} \\
\text{a}
\end{array}
\]

\[
\begin{array}{c}
\text{S}
\end{array}
\]

\[
\begin{array}{c}
\text{VP}
\end{array}
\]

\[
\begin{array}{c}
\text{Adj}
\end{array}
\]

\[
\begin{array}{c}
\text{yellow}
\end{array}
\]

\[
\begin{array}{c}
\text{cat}
\end{array}
\]

\[ \Rightarrow \]

*before S-pruning

\[ [89] \]
Using such terms and phrases as actor, goal, causer, place, dative, instrument, action, and causative verb the sememic stratum of stratificational grammar, the situational role of tagmemics, the cases of Fillmore, and various new ideas within transformational generative grammar have presented interesting insights into abstract relationships within the sentence. This paper maintains that in this area we may also learn from Pāṇini's treatment of the kārakas ("the capacities in which things become instrumental in bringing about an action").

The kārakas - separation, recipient, instrument, location, object, and agent - are defined in 33 sūtras of the first book of the Astādhyāyī and are referred to in later operational statements. Central to the definitions of the kārakas, although not explicitly stated in them, is the concept of cause. This is demonstrated by example sentences such as

(1) The boy eats the apple.
(2) The boy likes the apple.

where in (1) the boy is the agent and the apple is the object but in (2) the boy is the recipient (defined as that which is pleased of the senses 'like') and the apple is the agent because an inherent feature within the apple causes the boy to like it.

The formal notation of the definitions is also demonstrated.
I. The distinction between emphatic and reflexive forms: emphatic forms function with nouns; reflexives with verbs.

A. Emphatics: 1. He himself saw the president. (Expansion of NP)
   2. John and myself heard the speech.
   1a. He saw the president himself. (Reordering)

These examples, like the following ones, are handled transformationally.

B. Reflexives: 1. He prides himself on his efficiency.
   2. He presented himself before the king.
   3. He saw himself in the mirror.
   4. He built himself a house.
   5. He considered himself defeated.

Sentences 1, 2 and 3B function differently, necessitating the recognition of three verb classes which enter into reflexive constructions. 4B is a "beneficiary" and may be paraphrased using "for himself." 5B violates the transformation of Lees and Klima which fails to account for reflexivization involving two simplex sentences.

Postal: a brief description of why these treatments fail.


IV. Problem areas: where the "self" form of the pronoun is in free variation with the simple object form; where the transformation suggested to specify reflexive constructions must be blocked.

V. Conclusions: The difficulty involved in the three verb classes 1, 2 and 3B; the unpredictability of pronoun form in certain constructions involving prepositions other than "for."
This paper examines some of the powerful mechanisms available to generative grammar in its various current formulations. It suggests that these mechanisms can be heavily constrained by some syntactic universals that prove to be necessary to account for some heretofore frequently ignored facts of language.

In particular it is suggested that there exists an intimate relationship between relative clause and WH question formation and that these are in turn closely related to an as yet undefined relational notion, "topicalization". Generative grammarians, particularly in investigating English, have sometimes grouped various phenomena under the undefined notion, "topic-comment", and then dismissed the importance of these phenomena as "performance matters", "matters of style", "low level phenomena", etc. However, investigation of languages from the Malayo-Polynesian or Niger Congo groups are more revealing of the necessity of some formalization of "topic-comment" in order to account for the intimate relationship among syntactic processes as noted above. Any successful account of these interrelationships would add universal constraints to the syntax that would provide much needed limitation on the power of the grammar.

Data from Yoruba, a Niger-Congo language of West Africa, will be especially important to the explication of this paper.
The possibility of 'John killed John' v. 'John killed himself' has led TG grammarians to suggest that nouns are indexed when picked from the lexicon. However, if we know that 'John is the teacher', it becomes a purely arbitrary (and therefore undesirable) decision whether 'John killed himself' derives from 'John killed John' or from 'John killed the teacher'. The problem disappears if we view syntax as a device for realising the semantic content of an utterance (cf. Chafe, Lamb), rather than regarding semantics as an 'interpretive' adjunct to the syntax. An NP usually serves one of two functions: it tells the hearer to add a new referent to his 'knowledge of the world' -- the establishing function; or it uniquely identifies one of the referents already in the hearer's 'knowledge of the world' -- the re-identifying function. (This opposition is connected with, but not the same as, that between indefinite and definite articles.)

For a referent to be re-identified, certain questions are asked:

(1) Is it the speaker or hearer, or a set containing one or both of these? (2) Has it already occurred within the 'proposition' (cf. 'kernel sentence')? (3) (optional) Has the referent a name (the linguistic equivalent of an index)? Otherwise the NP will consist of 'the' followed by as much information as is needed uniquely to identify it: the various referents are arranged in a mentalistic space, and the target referent must be the nearest one to the focus of attention which fits the description. (Where one referent is nearer the focus than all others, the appropriate 3rd-person pronoun is used.) Thus the index corresponds to the NP as a whole. Reflexive pronouns are just one phenomenon suggesting that generative syntax is not always the most fruitful way of looking at language.
It is well known that in French the schwa or "mute e"--represented orthographically by the letter e--often has no phonetic realization in the spoken language. Since the schwa is not pronounced, need it then be indicated in phonological representations? In Schane (French Phonology and Morphology) I argued that schwas are indeed needed in underlying representations if one is to deal in any interesting way with the complex morphophonemics of contemporary French. I attempted to show the simplicity of the overall phonological system, once schwas are recognized at some fairly abstract level. In this paper I still argue for the necessity for underlying schwas, but this time the evidence is drawn from a more concrete level. The occurrence of pronounced schwas is examined in several different styles: songs, poetry, formal discourse, colloquial speech. Rules are formulated for relating these various styles, rules which delete schwas in specific phonological environments. What is particularly interesting is that there emerges a hierarchy of permissible deletions.
IMITATION OF SENTENTIAL AND NON-SENTENTIAL WORD STRINGS BY CHILDREN AND ADULTS

Given that the ability of subjects to imitate sentences differs significantly from their ability to imitate nonsentential word strings of equal length, this study asks about the possible triggers for the sentential vs nonsentential imitation strategies in terms of subject age and the approximation to sentencehood of the stimulus word string.

A single word list was recorded by a single trained speaker. This word list was then spliced into a test tape in such a way that some word strings were sentences, others were well-ordered syntactically, but were anomalous, still others deviated from well-formedness by misorderings of major constituents, words within constituents, or both.

The test word strings were presented to adult and child subjects in an imitation task. Deletion, addition, replacement, and metathesis errors in the imitations were noted and analyzed.

Adult subjects clearly treated well-formed word strings as sentences, showing essentially no error for these stimuli; considerable errors were made by adults on syntactically ill-ordered strings. Thus, the absence of suprasegmental features which normally accompany sentences had no effect on the subject's ability to distinguish sentential from nonsentential word strings. For very young children (three years old) this is not the case; all string types are treated similarly; indicating that the language beginner is tied to acoustic cues for sentencehood. Within a very short time, however, the child acquires the adult's ability to use syntactic cues for sentencehood and begins to show distinct treatments of the sentential and nonsentential stimuli.
Barth's 'Law' amounts to an incomplete formulation of a morphophonemic alternation occurring in the prefixed verb stem of Hebrew, observed by him almost a century ago. A similar rule apparently is operative in the closely related Ugaritic, as discovered more recently by H.L. Ginsberg. In verb stems having a shape UABVC, where A, B, and C are consonants and U, V are vowels, U represents the alternation a - i as conditioned by V, such that if V is a high vowel, U is low, and vice versa. The alternation, however, is further subject to conditions dependent on the distinctive features of the consonantism of A and B. But the same features which apparently trigger the operability of the alternation in Ugaritic block the alternation in Hebrew. As a result, the rule itself is reconstructable in part as being common to both languages, while many verb forms common to both are not.
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TOWARD THE RECOGNITION OF ICONICITY IN LANGUAGE

Jakobson's important adaptation and stimulating development of Peirce's semiotic have convincingly discredited the Saussurian dictum of the arbitrariness of the linguistic sign. The present paper explores an area of contemporary standard Russian verb morphology (nonvocalic stems) and elucidates the ways in which a language strives to maintain itself as a functional, strongly coherent system by establishing iconic congruences between its various phonological and grammatical categories. More specifically, the iconic (diagrammatic) relation between stress and markedness for certain distinctive features of stem-final segments is demonstrated. Further, the facts that (1) Russian verb stems (of all types) with stress mobility in the present/simple future are in complementary distribution with stems displaying stress mobility in the past tense; and (2) past/nonpast differences in stress are neutralized in the first syllable parallel and underscore the characterization of the relation between rule component and distinctive feature hierarchy as iconic. Finally, the hitherto unnoticed iconic correspondence between position of stress and tense is brought into sharp focus and adduced as a significant instance of systemic motivation in language.

[97]
I begin by arguing that the biological determinism of language that is apparent in Chomsky's writing is in no way essential to the theory and descriptive techniques of transformational linguistics. On the contrary, this orientation has had the unfortunate effect of diverting the attention of linguists away from the socio-cultural dimension of language. Indeed, as increasing attention is being given to the semantic component of transformational grammar it is apparent that we are being led irrevocably to a greater concern with socio-cultural contexts—despite Katz and Fodor's assertion that grammars seek to describe the structures of sentences in isolation from their settings in linguistic discourse and their nonlinguistic contexts.

Weinreich, it seems to me, correctly stressed the deep interpenetration of syntax and semantics in generative grammars. Yet he failed to realize that his argument--i.e. that semantic statements, handled entirely in the lexicon and in the "deep structures" of language, can and must account for the behavior of words in context, for poetic usages, idioms, and other deviant utterances—would involve specifying an endless variety of social and cultural conditions.

It follows that transformational linguists are, as they give more attention to the semantic component, being forced to a drastic revision of their stated goal of setting up grammars that will predict all the sentences of a language. This is patently unrealistic if one is to account for deviant utterances and when one recognizes that the socio-cultural contexts which are essential for specifying and interpreting the lexicon are infinite and governed by highly complex rules that are often ambiguous, contradictory and inconsistent.

A more realistic alternative for the transformationalists is to describe grammars as "ideal" or "constructed" types--models that will generate the most typical kinds of sentences in a language or its sub-groupings. In practice transformational grammars of English have had an implicit social base—generally that of educated speech—although
the theoretical implications of this fact have been ignored. Chomsky's summary dismissal of anthropological linguistics can not be accepted when it is realized that the semantic component (and all it implies) is a crucial feature of the deep structure of language.
Among the syntactic and semantic facts for which a theory of negation must account are the following:

1. There are negative sentences which are ambiguous, while their positive counterparts are not: "John didn't talk until 2 o'clock."

2. There are negative sentences with no positive counterparts: "John didn't leave until 2 o'clock."

3. There are negative sentences with subordinate clauses which cannot exist as main clauses: "I don't believe John got up until 2 o'clock."

4. There are synonymous pairs of sentences which vary as to whether they can occur with neither: "I doubt that John will come, and so does Fred" versus "I don't think that John will come, and neither does Fred."

5. There are synonymous pairs of sentences in which different surface elements are negated: "Mary doesn't look good in anything" and "Mary looks good in nothing."

6. There are sentences with multiple negatives which cancel each other out, even though they are on different surface constituents: "There is nothing I wouldn't do for you."

7. Negative sentences in which the subject is stressed are usually ambiguous: "John didn't wash his hands" is paraphrased by either "It was John who didn't wash his hands" or "It wasn't John who washed his hands."

Most of the above facts are well known, having been pointed out by Jespersen, Klima, etc.; and explanations have been posed for some of them. The difficulty is providing a coherent syntactic and semantic account of all of them. This paper explores ways of accounting for these facts.
The order relation as applied to linguistic rules is generally considered to be irreflexive, asymmetric, and transitive. The rules of Pāṇini’s grammar may be ordered with respect to each other in at least four ways: (1) the actual sequence of occurrence in the Astādhyāyī "from left to right," which is presupposed by the phrasing of the rules, e.g., with respect to anuvṛtti "recurrence"; (2) the actual sequence of occurrence in the Tripādi (8.2-4), which is governed by the metarule 8.2.1 (pūrvatrasiddham "what follows is regarded as not having taken effect with regard to the preceding"); (3) the pairs of rules ordered in accordance with the metarule 1.4.2 (vipratisedhe param kāryam "in case of contradiction between two rules, the latter has to be applied"); and (4) the pairs of rules ordered in accordance with the distinction antaraṅga/ bahiraṅga (cf. paribhāṣā 51: asiddham bahiraṅgam antaraṅge "that which is bahiraṅga is regarded as not having taken effect when that which is antaraṅga is to take effect"). These four kinds of order are analysed in terms of the concepts of reflexivity, symmetry, and transitivity.
The re-examination of accepted views of linguistic theory which has accompanied the development of generative grammatical theory has helped linguists out of a number of blind alleys. However, certain of the alternative views which have been proposed seem to continue the descriptive and conventionalist outlooks which went before. This is implicit, at least, in recent views regarding levels of adequacy in linguistic theory, the role of simplicity measures in grammar, and the relationship of universal grammar to a general theory of language. It is argued that these views severely limit the possible scope and interpretation of linguistic theory, and that in addition they embody a number of implicit presuppositions regarding the nature of language which require serious evaluation.
Karl V. Teeter, Harvard University

AN ALGONQUIAN PHILOSOPHY OF INFLECTION

Study of the most complex verbal inflections in Malecite-Passamaquoddy, an Algonquian language of Maine and New Brunswick, reveals the necessity of distinguishing an "inner" and "outer" layer of inflection. This distinction turns out to correlate both with certain previously necessary definitions of logical vs. grammatical (or deep vs. surface) structure, and with part-of-speech distinctions, the inner layer inflections pertaining only to the verb and the outer layer shared with the noun and pronoun. Taken together, the manner in which these inflectional categories are expressed and the features chosen for marking show the outlines of what may be called an Algonquian philosophy of inflection which, when other languages and further details are brought in, may be expected to amount to the Algonquian philosophy of inflection.
The purpose of this paper is to examine the usage of 'bound form' and 'free form' in a representative sampling of the linguistic literature and to describe the kind of linguistic theory that uses this terminology. We will demonstrate the adequacy and inadequacy of operational criteria for the determination of bound and free forms. And, since the kind of linguistic theory within which this terminology developed did in fact use this differentiation to distinguish morphology from syntax, we will question the validity of using linguistic units -- i.e., tree or elliptical forms -- which themselves are not properly described until much later in the description of syntax as a means of determining what the basic tactic unit of syntax is to be.

We will examine some of the logical conclusions of this system and speculate on possible avenues of development had the notion of bondage and freedom not been restricted to morphology but had developed as a real alternative to immediate constituent analysis. This is precisely what Hjelmslev tried to develop in his Prolegomena and which has been introduced in this country as dependency theory.

We will conclude that new criteria must be developed to determine what is to be our basic unit of syntax and that the notions of bound and free can be modified to permit a new methodology of syntax and a new model which is apart from and a substitute for immediate constituent analysis and wherein notions of noun and verb phrase are completely re-formulated.
This paper is concerned with the development of consonant plus yod clusters in Cretan and Cypriot. A solution will be presented which allows for a uniform treatment of all series of consonants and which explains the different developments in the two dialects in terms of rules which apply in Cypriot, but not in Cretan.

The Cypriot materials were collected in the district of Solea, while the Cretan materials were collected in the Kritsa area. Data being considered are words like standard Greek πέμπτε 'they took', Cretan ψέμπτε, Cypriot τζέμπτε; standard Greek κρέος 'weather', Cretan τζερός, Cypriot δζερός; standard Greek πός, pl. ποί, Cretan ψός, pl. pxί, Cypriot τζός, pl. τζί.
In the transformational-generative model the hearer's perception of an utterance is considered to be minimally dependent on the acoustic material he receives and maximally dependent on a syntactic structure that he postulates as well as internalized phonological rules. The study of the phonetics of speech is of marginal interest in this model; there is no place in it for taxonomic phonemics; and, no well-developed phonological hierarchy is presented.

The thrust of this paper is that the T-G model by deemphasizing these phonological interests of structural linguistics cannot adequately explain what a hearer does in understanding an utterance. Examples are given from Highland Chontal of Oaxaca, Mexico to illustrate the fact that language consists of interpenetrating phonological and grammatical hierarchies with comparable units. At times, the recognition of grammatical units depends on the acoustic perception of phonological units. The fit between these units provides the necessary clues for communication between a speaker and a hearer.

The T-G model by not equally stressing the importance of these two interpenetrating hierarchies fails to provide a model of a grammar that applies equally well to both a speaker and a hearer.
Theo Vennemann, University of California at Irvine

ABLAUT IN MODERN STANDARD GERMAN OR PHONOLOGICAL CONSERVATISM

In their paper "Umlaut in Modern German", presented at the last LSA Summer Meeting, Emmon Bach and Robert D. King suggest that, with necessary modifications, umlaut is in Modern Standard German still the same process that it was in Old High German, namely assimilation of a stressed vowel to the frontness of an (underlying) high front suffixal vowel; it seems therefore that this fundamental process of German phonology has survived a considerable number of subsequent, superimposed changes over a period of more than a millennium. In an article in Phonetica (XVIII, 65-76), I have shown that also the High German Consonant Shift, earlier than umlaut, is still an important synchronic rule of German; it follows from this that the underlying Obstruent system of Modern Standard German is essentially that of Proto-Germanic. -- In the present paper, the strong verb system of Modern Standard German is described entirely by an analysis of root structure, i.e., without the use of a costly morphological subclassification (as employed by J.R. Ross in Studia Grammatica VI). This description, which is also extended to other processes of word formation, demonstrates that an analogue of Proto-Indo-European ablaut is still the pivotal morphophonemic process of Modern Standard German and that, with minor modifications which are set forth in detail, the vowels and resonants in the lexical representation of Modern Standard German roots are those of Proto-Indo-European. In this way it is demonstrated that in spite of conspicuous sound changes, German phonological representations have changed very little during the last millennia. It is in this sense that German phonology can be called conservative. -- This result is then compared with observations made about generative descriptions of other languages, primarily the phonology of English by N. Chomsky and M. Halle.
Linguists have done little enough work in the area of speech pathology, yet have discussed at length the distinction between competence and performance. This paper is part of a current dissertation project exploring the relationships between constructs in linguistic theory and patterns of language behavior in aphasic adults. The argument rests on the assumption that one can assume a property of the grammar to be actually a part of the organization of language in the brain, if a concomitant of brain damage is the loss of that property.

A patient, W.L., fell from a 30' cliff last April and suffered a hematoma in the left temporal region. His aphasia is not severe; it can best be labeled as semantic aphasia affecting both language recognition and production. Of particular interest to linguists is his difficulty with embedding transformations, such as relativization, as opposed to his facility with insertion transformations, such as negation. Evidence for this is from a series of language tests given to W.L. which are compared to his conversational speech. Although this brief paper will raise more questions than it answers, a suggested explanation—that the patient has lost the ability to make referential identities—is offered with some supporting data.
In this paper we discuss the underlying representation of the 'tense' segments in Bolivian Quechua: the glottalized and aspirated stops p, t, č, k, and q. The issue is whether these segments should be assigned the status of systematic phonemes, or whether a more satisfactory analysis involves the use of morpheme features. An argument in favor of the last analysis is presented. It is next argued that the distribution of the tense segments in Quechua morphemes provides evidence for the claim that there is something linguistically significant about the notion "left-most X in a string."

Some evidence from two Indo-European languages is examined in support of this claim, and we conclude that these data, together with the data from Quechua, provide support for the conventions governing the expansion of cover symbols in phonological rules.
In recent years a great deal of discussion and criticism has centered around the use of alpha-switching or exchange rules in phonology, as exemplified by the Chomsky-Halle vowel shift rule for English phonology. In *The Sound Pattern of English*, Chomsky and Halle discuss the opposition to such rules which is based on the claim that the addition of an exchange rule would destroy or greatly impair communication, and conclude that this is not a valid argument. However, the issue is still raised as to whether in fact exchange rules should be disallowed.

In this paper a situation is described in which a language has two dialects (both of which are in the competence of all native speakers of the language) which differ mainly in their phonological systems, and which have usually been described as having two coexistent phonemic systems. In fact, however, there would seem to be one underlying system; those differences which have been termed "systematic" would seem to be most easily explained by a series of optional rules similar to those postulated by Chomsky and Halle to describe an early stage in the development of Modern English phonology, namely, diphthongization, vowel shift, and diphthong laxing. The situation differs from that in the (historical) English vowel shift in that all speakers of these dialects have these optional rules; however, the use of the rules in any one particular situation is not predictable, varying with social, emotional, and other factors. The resultant vowel alternations should, if the criticism of the English vowel shift rule is well-founded, result in a loss of intelligibility among speakers of the language. Since this does not appear to be the case, one must conclude that the criticism of exchange rules on such grounds is ill-founded.
The languages of the Malayopolynesian family show a number of forms with a meaning 'eat', 'feed', 'food', 'fodder' and the like spread through a large number of languages in various branches which are apparently cognate. Dempwolff reconstructs several different disyllabic roots for Proto-Malayopolynesian to account for these forms, but even so, his reconstructions do not account completely for the forms which appear in the languages he considered. However, if one reconstructs a monosyllabic root *kan which means 'eat' (as had been suggested by Brandstetter before Dempwolff), all of these different forms can be explained. The disyllabic roots which appear in the daughter languages can be shown actually to consist of reflexes of the root *kan plus some additional phonemes. Although these additional phonemes do not make up an affix in most of the languages under consideration, the same corresponding phonemes re-appear in addition to reflexes of *kan in a large number of languages, so that we may be certain that these phonemes appearing in addition to reflexes of *kan in the various languages are actually remnants of affixes. Further, they are of the shape corresponding to affixes which are alive and productive in some of the languages of the Malayopolynesian family. There are six affixes in all which appear with reflexes of a root *kan in various languages.

If we reconstruct the meaning of the root *kan as 'eat', a good idea of the meaning of these six affixes can be obtained. Because of the wide distribution of these affixes throughout languages in various branches of the Malayopolynesian family, we may be certain that these affixes existed in the proto-language, and we may have a good notion of their meaning.

Reflexes of these affixes are still alive and productive in languages of the Philippines--all six occur in Tagalog, and the meanings which we may ascribe to them in the proto-language correspond closely to the meanings which they currently have in Tagalog. This fact is an important indication that the morphological complexity which characterizes the
languages of the Philippines and nearby areas is not a recent development, but may well reflect the typology of the proto-language.

A further important upshot is that here we have the first definitive reconstruction of a monosyllabic root in Proto-Malayopolynesian. This fact is of interest to Austronesianists who have been searching for monosyllabic roots in Proto-Malayopolynesian in order to compare them with monosyllabic roots in languages on the Asian mainland.
Karl E. Zimmer, University of California at Berkeley

PSYCHOLOGICAL CORRELATES OF SOME MORPHEME STRUCTURE CONDITIONS IN TURKISH

The problem examined is the degree of awareness which native speakers of Turkish exhibit with regard to different morpheme structure conditions in their language. Tests seem to indicate that morpheme-internal restrictions on vowel co-occurrence matching those which prevail across intra-word morpheme boundaries have greater psychological reality than a restriction which applies only to vowels within bases and is not matched by a phonological rule governing the selection of suffix vowels. The results obtained support the view that not all observable regularities in languages need to be viewed as forming part of the knowledge that native speakers internalize; in particular, speakers may well be only very imperfectly aware of regularities that do not fall within the system of fully productive rules of the language.
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