



An introductory inservice course in linguistics
by Sharon Lee Showers Hoover

A thesis submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of
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Abstract:
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Date July 30, 1969

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I

INTRODUCTION

I

Linguistics has become a common term in education.

Educational journals abound with articles concerning the nature of linguistics and its applications to the teaching of reading, writing, literature, poetry, foreign languages, and English grammar. Many textbook companies are proclaiming that their elementary reading materials and English textbook series are now linguistically oriented. Linguistics is an accepted part of the agenda at professional English and elementary conventions; the major portion of the program is sometimes devoted to it. However, many teachers, because they have no background in linguistics, find themselves unable to read the professional articles critically, evaluate the new teaching materials adequately, and judge the polemics, both for and against linguistics, realistically.

The above factors led this teacher to undertake a serious study of linguistics and to organize the results of that study into an inservice class for other teachers who would not have the time or opportunity for such an extensive project themselves. This paper will present the course of study which was developed and taught as an introductory inservice class in linguistics for twenty-five English teachers of grades four through twelve in Allegany County, New York.

This class met one and one-half hours once each week for

ten weeks. Since the subject matter of linguistics is far too broad to introduce in one short course, it was necessary to severely limit the topics to be included. There were several factors which controlled the selection of content.

First, it was assumed that in order for the teacher to determine in what ways linguistics could help him achieve his instructional goals he must: 1. be able to formulate clearly the objectives he has in the classroom; 2. have some awareness of contemporary thought concerning the processes of education which is influencing current curriculum study; and, 3. have some knowledge and understanding of linguistics. As vital as the first two assumptions are to any articulate curriculum in English, they lay beyond the scope of this particular class.

The third assumption led directly to the decision to focus this course primarily on subject matter in linguistics, rather than on the arguments which surround it. It was the conviction of this instructor that the teacher must realize that linguistics is an autonomous discipline which interacts with various other areas, including the teaching of English. The question which the English teacher faces is not whether linguistics is "good" or "bad", but in what ways the methods and findings of the linguistic scientists can help him achieve his instructional goals. Only after the teacher has some

knowledge of linguistics can he assess its value in his teaching.

Another factor which played a role in selection of the content was the background of the instructor: the major portion of his study in linguistics was in the English grammars. Making grammar the central concern of the class can be justified by its status as a controversial issue in the teaching of English and its role as the primary area in which linguistic content is finding its way into the new English textbook series. The class study was primarily focused on the three grammars which are providing the basis for most of the new content in the English textbooks: Fresian*, aspectual, and transformational-generative. Aspectual grammar was studied in more detail than might seem justified by the textbooks' content because teachers in this particular class were familiar with the Buffalo English Linguistics Project and were interested in knowing more about the grammar which was used in its materials.

The interests of the teachers influenced two other decisions of content selection, the most notable being that the final session was entirely devoted to applications of linguistics to the teaching of poetry and literature. Also,

*Fresian grammar refers to the structural analysis of English which Fries (4) presented in The Structure of English.

since many of the teachers were already using the history of the language in their classroom work and because an acquaintance with the history of English provides an excellent basis for an understanding of the concept of language as an ever-changing phenomenon, the second session was devoted to a sketch of the history of English.

Finally, it was decided to begin the class with a lecture on the history of the study of language so that teachers, who are presently teaching traditional grammar and who have had little or no background in linguistics, might be able to think of grammars with a clearer perspective than they had been able to previously.

There was no textbook for the course. Instead, the teachers were encouraged to read selections from a general bibliography (Appendix) and from a textbook bibliography (Appendix). The selections in the former were determined both by their suitability for acquainting teachers with some phase of linguistics, and by their availability; most of the books were actually on hand in the classroom for the teachers to take home. The selections in the latter were also available in the classroom for teachers to take home and study. They were chosen because they represented major attempts to incorporate linguistic materials into English textbook series. The most regrettable omission from this bibliography

was textbooks from Ginn and Company. Their newest textbook series represents a major adaptation of transformational-generative grammar for teaching language; however, they were unable to supply us with samples of their series.

Two outside speakers were brought in to add a broader perspective to the course. Dr. Hans Gottschalk, Chairman of the English Department at State University College at Geneseo and director of an NDEA linguistics institute at Geneseo during the summer of 1968, lectured on the history of English and suggested possible applications of it to the teaching of English. The other speaker was Henry J. Sustakowski, professor of linguistics at State University College in Buffalo and one of the principal investigators of the Buffalo English Linguistics Project. Professor Sustakowski lectured on the syntax of aspectual grammar and discussed the findings of the Buffalo English Linguistics Project.

The body of this thesis will contain detailed outlines of the material presented during each of the ten class sessions. Since each session was of equal length, the material is not always divided as it might have been if it had been organized into chapters. Explanatory material has been inserted at times to give the reader a better understanding of how the sessions were conducted.

This inservice class in linguistics aimed to give teachers some perspective concerning grammars of English, some specific knowledge of the syntactic systems which are being reflected in the "new" grammars in current textbooks, a familiarity with some new textbooks which incorporate aspects of various syntactic systems, and to encourage thoughtful reading of linguistic source material. The instructor tried to organize the material in a fashion that did least damage to the discipline of linguistics and yet was, at the same time, comprehensible to the students.

II

TEACHING OUTLINES FOR TEN SESSIONS

Session 1

History of Grammar

- I. The Greeks speculated on the nature of things, including the nature of language. There were two schools of thought concerning the nature of language: one held that language was "natural," the other that language was "conventional."
 - A. Those who thought language was "natural" believed that language arose out of the nature of man, was a matter of a priori knowledge, and was "at bottom regular and logical." (2:4) Several conclusions follow naturally from this philosophy.
 1. The rules of grammar must be absolute and unchanging.
 2. Linguistic change must be a matter of corruption.
 3. Earlier language must be more perfect because it is nearer the source.
 4. The ancient Greek classics must be studied in order to develop rules to govern the use of the language to preserve "correct Greek."
 - B. Those who believed that language was "conventional" thought that language was comprised of arbitrary conventions, established by use, and subject to change. This philosophy of language leads to several conclusions.
 1. Language changes normally as its use changes.
 2. The rules of the grammar of the language change as the language changes.
 3. One stage of the development of the language is not better or worse than another. Each serves the purposes of its own time.
 - C. The speculation and controversy about the nature of language led the Greeks to examine their language carefully.
 1. Early Greeks began to develop ideas concerning

the parts of speech and some grammatical principles.

- a. Plato is credited as the first to divide "the Greek sentence into a nominal and a verbal component. . . ." (9:26)
 - b. Aristotle, followed by the Stoics, began the development of the "word class system." (9:28)
2. Later Greeks consolidated the ideas concerning the analyzation of the Greek language into formal grammars.
- a. In the second century B.C. (9) Dionysius Thrax, a student of the "natural" school, wrote his Techne grammaticke in which he delineated eight word classes: noun, particle, verb, conjunction, preposition, article, pronoun, and adverb. (See Appendix page 92)
 - b. In the second century A.D. Apollonius Dyscolus wrote a comprehensive syntax of Greek "built on the relations of the noun and verb to each other and of the remaining classes of words to these two." (9:37)
- II. The Romans borrowed extensively from the Greeks in intellectual matters, including the study of language.
- A. In the middle of the fourth century B.C. (4:426) Donatus wrote Ars Grammatica Minor, a short Latin grammar based on Greek models. Abelson reports this to be "the most widely known textbook on grammar throughout the middle ages." (1:36) Donatus' text is organized around eight parts of speech: noun, pronoun, verb, adverb, participle, conjunction, preposition, and interjection. (1:37-38)
 - B. In the sixth century A.D. (4:426) Priscian wrote a more encyclopedic grammar (eighteen volumes) which was to rank with Donatus' grammar. Robins (9:62) claims that Priscian's grammar was "by far the most

widely used grammar . . . and formed the basis of mediaeval Latin grammar. . . ." Like Donatus, he did not produce an original work, but was a compiler of previous grammars. His admitted primary sources were Thrax and Apollonius.

III. Throughout the middle ages pedagogical grammars continued to be of great importance and, during the later middle ages, there was much speculation concerning the nature of language.

A. Pedagogical grammars continued their debt to the Greeks.

1. The grammatical works of Donatus and Priscian, based directly on Greek sources and written originally for native speakers of Latin, were widely used as textbooks by those for whom Latin was a second language.
2. In 1199 (8:37) Alexander de Villedieu wrote his famous Doctrinale which, at first, supplemented and, later, replaced the grammars of Donatus and Priscian in Western Europe. Although it was primarily based on previous grammars, especially Priscian, it improved on the earlier writers in several ways.
 - a. It was written in the fashionable verse style of the day.
 - b. It replaced the classical authors with more current Latin usage.
 - c. It gave a much fuller account of syntax than had the earlier grammars.
3. Indicative of the English grammars which would follow was Aelfric's Latin Grammar "composed around 1000 for English children speaking Old English (Anglo-Saxon)." (9:70-71).
 - a. It was based on Priscian and Donatus.
 - b. Aelfric stated that his grammar "would be equally suitable as an introduction to (Old) English Grammar." (9:71)

- B. Mediaeval scholars wished to develop a philosophical system which would encompass all knowledge and understanding, including language. This led to renewed interest in theories concerning the nature of language.
- IV. In the sixteenth and seventeenth centuries more interest was aroused in language, but attitudes toward language had changed little from the time of the Greeks and Romans.
- A. Interest in languages grew with the spread of various languages through travel, exploration, and the use of the printing press.
 - B. Pedagogical European grammars were written, not for the benefit of the native tongues, but as a basis for Latin which was still central in the curriculum.
 - C. General grammars were written "to demonstrate that the structure of various languages, especially of Latin, embodies universally valid canons of logic." (2:6) The most famous of the general grammars was the Port-Royal Grammar of 1660, a work by several collaborators. (4:434)
- V. During the late 1700's grammar began to develop in three separate traditions.
- A. The 1700's saw the rise of the vernaculars and of the middle class. As the middle class found themselves with more leisure, education, and culture, they demanded grammars of rules which they could master so that they would speak "correctly." Many people yearned to rescue English from its gradual degeneration and to give it the same stability as classical Latin. The time was ripe for dictionaries, rhetorics, and grammars of the English language.
 - 1. In 1762 Robert Lowth's A Short Introduction to English Grammar was published. In his introduction he stated the purpose of his grammar thus: "The principal design of a Grammar of any Language is to teach us to express ourselves with propriety in that Language, and to

be able to judge of every phrase and form of construction, whether it be right or not."
(6:x)

a. His method of expounding his grammar was authoritarian.

(1) He set down the rules of grammar.

(2) He illustrated the "correct" way with quotations from such authors as Shakespeare, Milton, Pope, and Dryden.

(3) He used the same authors to point out errors which were made. Many of the quotations illustrating errors were from the King James' Bible.

b. The criteria for the rules of his grammar were much the same as those of many grammarians before him.

(1) His criteria was sometimes universal grammar, sometimes Latin grammar.

(2) "Good authors" were used to establish rules if they concurred overwhelmingly.

2. As English replaced Latin as the central subject in the schools, a demand arose for an English grammar written especially to teach young students "the art of speaking and writing the English language with propriety."
(7:1) In 1795, Lindley Murray published English grammar adapted to the different classes of learners for a girls' school in York. In 1797 he published companion books of exercises and keys to the exercises.

a. Murray's grammar (7) was written in a brief, definitive style with students in mind. It was organized under five headings.

(1) Orthography, which treated the letters of our alphabet.

- (2) Etymology, based on nine parts of speech.
 - (3) Syntax, in which all the parts of speech were again considered and the rules for parsing set forth.
 - (4) Prosody, which presented the rules of proper pronunciation and versification.
 - (5) Appendix, which consisted of such practical matters as punctuation and other conventions of writing.
- b. Murray's Grammar was the leading textbook in the United States for fifty years. (3:71) There were also many "piracies and thinly disguised imitations." (3:71; 5)
3. School grammar underwent only minor changes from 1797 to 1900.
- a. In 1851 Stephen Clark in his Analysis of the English Language proposed that analyzing sentences into major elements, such as subjects, predicates, and modifiers, replace parsing.
 - b. Different graphic devices to illustrate Clark's procedures of sentence analysis appeared until, by 1900, Reed and Kellogg diagrams were an accepted part of most school grammars.
- B. About the same time as Robert Lowth's Grammar appeared, another tradition developed in grammar which Gleason has labeled "scholarly traditional grammar." (3:76). While the general structure of "scholarly traditional grammar" was much like Latin grammar and school grammar, it became much deeper and more diverse. Its scholars asked many questions and collected tremendous numbers of citations from literature. The scholarly grammatical tradition culminated in three great reference grammars. Unfortunately, few teachers ever became

well-acquainted with these grammars.

1. Henrik Poutsma: A Grammar of Late Modern English (1914-1929).
2. Etsko Kruisinga: A Handbook of Present-day English (1925).
3. Otto Jespersen: A Modern English Grammar on Historical Principles (1909-1949). Jespersen was the only scholarly grammarian who gave much thought to the over-all structure of language.

C. The third tradition in grammar which began in the late 1700's leads directly to modern linguistics. Exposure to the language and linguistic tradition of India provided a great impetus to the study of language in Europe.

1. 1786 is often marked as the beginning of modern linguistics for in that year "Sir William Jones of the East India Company read his famous paper to the Royal Asiatic Society in Calcutta, wherein he established beyond doubt the historical kinship of Sanskrit, the classical language of India, with Latin, Greek, and the Germanic languages." (9:134)
2. Indian linguistic tradition was older than that of Western Europe and had developed completely independent of Greek influence. It was organized in an entirely different manner and was, in some aspects, ahead of European thought.
 - a. Indian work in phonetics was superior to any that had been done in Europe. Their study of phonetics was organized around the following topics (9:142):
 - (1) The processes of articulation.
 - (2) The segments of speech (consonants and vowels).
 - (3) The synthesis of the segments into phonological structures.

- b. Indian scholarship, especially Panini's (c. 350-250 B.C.) (2:11), became best known for its rigorous grammatical analysis of Sanskrit.
 - (1) The Indian grammarians carefully and systematically studied the rules of word formation.
 - (2) The rules of word formation were set down with extreme economy.
- 3. Equipped with the methods and content of Indian grammatical scholarship, the European scholars began the gradual reconstruction of Proto-Indo-European (PIE), the common ancestor of the Indian and European languages.
 - a. The reconstruction began with detailed examinations and comparisons of languages such as:
 - (1) R.K. Rask: Investigations concerning the origin of the Old Norse or Icelandic language.
 - (2) Franz Bopp: Concerning the conjugation system of the Sanskrit language in comparison with those of the Greek, Latin, Persian, and German languages.
 - b. As the history of individual words and sounds were patiently traced and compared, it became apparent that changes in the languages were systematic and could be stated in terms of general principles or laws.
 - (1) In 1822 Jacob Grimm published the second edition of the first volume of his comparative grammar of the Germanic languages (Gothic, Scandinavian, English, Frisian, Dutch, and German) in which he "presented a systematic exposition of the correspondences of consonants between

Germanic and the other Indo-European languages." (2:14) This has since been known as Grimm's Law.

- (2) In 1875 Karl Verner published An exception to the first sound shift in which he explained most of the exceptions to Grimm's Law by taking into account the position of the accent in the words at the time the change occurred. Verner's Law led to the idea that perhaps all apparent irregularities of the sound laws could be explained, and, subsequently, many of them were.

At this point in our outline we are going to shift our attention to the study of language in the United States. This is not to ignore or belittle the continued advances in linguistics in England and on the continent, but simply to concentrate on that tradition in modern linguistics which most immediately affects us.

VI. Linguistics in the United States was firmly rooted in European linguistics; however, there were two major reasons why American linguistics developed a rigorous, unique tradition of its own after 1900: the presence of the American Indian languages and the stimulation of several brilliant men.

- A. The three most important linguists in the United States in the early part of the twentieth century were Franz Boaz, Edward Sapir, and Leonard Bloomfield.
1. In 1899 Franz Boaz became the first professor of anthropology at Columbia University.
 - a. "He was a very active, meticulous, and productive field worker" (2:41) who carefully trained students in phonetics so that they might study the language as well as other aspects of the culture of the American Indian.
 - b. Many of his students concentrated on field work in language, using native informants,

in order to analyze the unwritten Indian languages. With these students American linguistics began in earnest.

2. Edward Sapir, a student of Boaz and also a meticulous field worker, brought to American linguists a much broader outlook.
 - a. Of a more theoretical mind than Boaz, he developed a concept of the phoneme.
 - b. In 1921 he published Language, a very readable and influential little book, which displayed profound insights into the nature of language.
 3. Leonard Bloomfield has been called "the great synthesizer" (3:46) in American linguistics.
 - a. He was trained in Europe in historical linguistics.
 - b. He produced excellent analyses of several American Indian languages.
 - c. In 1933 he published Language which summarized the entire field of linguistics and was subsequently the most widely used textbook for linguists in the United States.
- B. The presence of the American Indian languages exerted influence on American linguistics in several ways.
1. There was a sense of urgency in gathering efficient and accurate records of previously unrecorded, and often dying, languages.
 2. The great diversity between the Indian languages and the Indo-European languages and among the Indian languages themselves led to a greater and greater insistence that each language must be analyzed in terms of its own structure. American linguists moved further and further away from using meaning as a criteria in structural analysis of a language.

Concluding Remarks

This outline of the history of the study of grammar in the Western world has brought us up to the concepts we will study in this course. In any abbreviated history it is necessary to pick and choose the particular ideas which one will present. This is not an attempt to distort, or to ignore parts of, the history, but a means of developing a certain thread of ideas which have a particular pertinence at the moment.

Next week Dr. Hans Gottschalk will present a lecture on the history of English. He will be pleased to answer questions on either the history of English or the teaching of it in the classroom.

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9. Robins, R.H. A Short History of Linguistics. Bloomington: Indiana University Press; 1967. p. 248.

Session 2

The English Language

(Outline of lecture given by
Dr. Hans Gottschalk)

I. Pre-English tongues in British Isles ? -- 449

A. Celtic

1. Celts in Europe

- a. In ancient times Celtic groups ranged from Asia Minor and ancient Sarmatia on the east to Britain and Portugal on the west.
- b. Most of ancient Gaul, the British Isles, Germany, as far east as the Elbe, the great Po Valley of Northern Italy, a large part of the valley of the Danube were at one time solid Celtic-speaking territories.

2. Groups in the British Isles

a. Ancient Celtic invasion from Europe

- (1) Goidels (Gael) west and north toward Ireland and Scotland
- (2) Brythons (Britons) to the middle and southern plains of the Isles
- (3) Caledonians and Picts to the extreme north of Scotland

b. Modern Celtic languages

Goidelic: Irish, Scottish, Gaelic, Manx
Brythonic: Welsh, Breton, Cornish

3. Celtic contributions to English languages and literature

- a. To the language, not more than fifty words
- b. To English literature, many romantic stories such as romances of King Arthur,

Tristan and Iseult

B. Latin

1. Roman occupation

- a. Roman invasion under Caesar 55 BC
- b. Withdrawal to defend Rome from barbarian invaders 440 AD

2. Roman contributions

- a. To the language -- place names, church rituals and law terminology (Latin)
- b. To the literature -- practically nothing of lasting value to the content

II. Old English or Anglo-Saxon Period 449-1066

A. Relationship to Languages of the World

- 1. Member of the Indo-European family which includes most of languages of Europe, a large number of languages of India, the language of Persia and of certain adjoining regions.
- 2. Belongs to the Germanic family of Indo-European language
Germanic language:
 - I. Northern Germanic (Scandinavian)
 - Swedish
 - Danish
 - Norwegian
 - Icelandic
 - II. East Germanic (Gothic languages now extinct)
 - III. West Germanic
 - German
 - Dutch-Flemish
 - Frisian
 - English

B. Anglo-Saxon Conquest of British Isles

1. Invasions

- a. Jutes in from South Jutland in Denmark in the southeastern part of the Isles.
 - b. Saxons from Holstein at Mouth of Weser in the southwestern part of the Isles, c 447 AD.
 - c. Angles from Schleswig in eastern and northern part of the British Isles, fifth century.
- 2. Celts driven to remote parts of Britain -- Wales, Scottish Highlands, Ireland, Cornwall, Davon, and into Brittany across channel.
 - 3. Main dialects of Conquerors
 - a. Kentish. Spoken by Jutes who were strongly Danish
 - b. Northumbrian or Northern. Spoken by the Angles and considered standard in the pre-Alfredian period (500-870)
 - c. West Saxon or Southern. Spoken by the Saxons, south and west of Thames and was considered the standard language from King Alfred's time 870, to coming of William the Conqueror in 1066.
 - d. The Mercian or Midland, east and west. Spoken by both Angles and Saxons in central part of England, especially around London and developed into a standard dialect in the latter part of thirteenth century and the nucleus of the present English language.

C. Danish Invasions

- 1. Danes in control of eastern and northern part of England, the Land of the Angles, from 787 to their defeat by King Alfred in 878 (Peace of Wedmore)
- 2. Invasion under King Canute of Denmark, Canute, on throne of Britain 1016-1042.

3. Contributions

- a. Language -- a large number of Danish words into English dialects, dialects sk words date from this period (sky, skin), place names ending in by and thorp and a number of common words like odd, anger, egg. Nearly five percent of our words are Scandinavian.
- b. Literature -- Anglo-Saxon epic, Beowulf of Scandinavian origin

III. Middle English 1066-1500

A. Norman French

- 1. Conquest of England by the French under William the Conqueror.
- 2. French language dominate in social and governmental affairs.

B. Prominence of three languages in this period.

- 1. Latin used by the church and by the law courts.
- 2. French spoken by the nobility in the court and used in governmental and business activities.
- 3. Anglo-Saxon (Mercian or midland dialect) used by merchants, working class, agricultural population, lesser nobility, etc.

C. The triumph of the Midland dialect

- 1. In 1362, English restored as the official language in law courts
- 2. By 1365, the Mercian dialect used about London, declared the standard for both spoken and literary language (Illustration: works of Chaucer, Cower, Wyclif, Lydgate, and others)
- 3. By 1380, a fusion of old English and French sources (Illustration: Chaucer's works)

4. By 1475-1500, crystallization of Middle English as official language by means of the printing press.

1. Researchers (10) who devised tests to measure the correlation between the teaching of formal grammar and the production of error-free composition concluded that there was little or no relationship between the two.
 2. Some psychologists (7) proposed that the transfer of learning was much more specific than had been previously thought.
 3. Surveys were made to determine just which errors in grammar students most often committed in composition. Lists of these items (5:14) were drawn up and much grammar teaching shifted to an emphasis on these errors.
- B. Surveys of errors were based on the certainty that the surveyor knew (from the rules of grammar) what was "right" and "wrong." The "usage movement" developed in an attempt to decide if the rules of grammar were justifiable.
1. J. Leslie Hall's English Usage (6) exemplifies the type of survey conducted in the beginning of the movement. He examined controversial usages by comparing them with the usages of "reputable" or "eminent" authors.
 2. Sterling A. Leonard's Current English Usage (8) represents a development in the survey of usage.
 - a. Leonard Examined 102 controversial usages by referring them to seven panels of judges: linguistic experts, members of the National Council of Teachers of English, well-known authors, editors, businessmen, members of the Modern Language Association, and teachers of speech. Another 130 items were submitted only to linguists and Council members.
 - b. The panels were asked to rate the usages as
 - (1) Formally correct English
 - (2) Fully acceptable for informal conversation

(3) Fully acceptable for technical uses
(this category assumed minimal importance)

(4) Popular or illiterate

c. Leonard's findings indicated a consensus on less than half of the items, and a great disparity between the opinions of the panels and the edicts of popular grammar textbooks.

3. Albert H. Marckwardt and Fred Walcott (9) tried to supplement Leonard's study in their Facts about Current English Usage.

a. Marckwardt and Walcott examined the same disputable items as Leonard by consulting the Oxford English Dictionary, Webster's New International Dictionary, second edition, and the fuller scholarly grammars.

b. Their findings indicated that Leonard's panels were very conservative.

4. Margaret M. Bryant (2) edited a comprehensive study of usage in 1962: Current American Usage.

a. Bryant compiled and summarized hundreds of usage studies.

b. The evidence was assimilated into alphabetical, cross-referenced, entries.

Example: NOT, ILLOGICALLY PLACED

Summary: "The all . . . not expression, as in 'All men are not alike,' is standard English."

Data: Summarized in a short discussion.

Other evidence: Evidence not summarized above was listed.

C. The usage movement led to changes (10) in the teaching of grammar.

1. Many grammatical details in textbooks were dropped or changed.

Session 3

Fresian Grammar

At the beginning of each session (except when a guest speaker was present) the members of the class discussed the reading they had done which pertained to the previous lesson. For instance, at the beginning of session three there was a discussion of the material on the history of language in the various textbooks listed in Bibliography II (Appendix p. 86). The teachers also contributed information from other sources and from their own experiences. They often argued the merits of the different sets of materials and different manners of presentation. In this way, the teachers became more familiar with the various textbooks and with what other teachers were doing in their classrooms. The role of the instructor during these discussions was limited to that of moderator.

Fresian Grammar

- I. The teaching of grammar in the United States in the twentieth century has varied greatly from one school system to another, both in quality and quantity of instruction. A great deal might be said about both. However, there is one particular sequence of events which can be traced directly from the formal grammar taught at the beginning of the century to the statement of Fresian grammar in 1952.
 - A. The use of statistical evaluation in educational testing and development of new ideas in psychology concerning the transfer of learning led to a movement called the "survey of errors."

2. Teachers gained respect for the direct observation of language.
3. As more emphasis was placed on those grammatical constructions of students which differed from "good usage," a piecemeal approach to grammar was strengthened and the study of grammar as a system was weakened.

II. The next stage in the usage movement was the attempt to survey actual usage of American speakers. In 1926, the National Council of Teachers of English commissioned Charles Fries, a member and a college English teacher, "to conduct a full-scale study to determine what grammatical matter should be taught in the schools." (5:17) This study eventually resulted in the publication of American English Grammar. (3)

At this point the teaching outline directly follows the Teachers' Materials: Appendix pp. 95 - 98.

III. Fries had planned that one, then two, chapters of American English Grammar would be devoted to the sentence. However, pressure to publish the materials which were completed and the growing bulk of the material on sentence construction persuaded him to postpone its publication until later. Pressures of the war and of teaching English as a foreign language further postponed this part of his study.

Finally, in 1946, Fries began to collect a new language sample and to analyze it in earnest. The result was the publication in 1952 of The Structure of English: An Introduction to the Construction of English Sentences. (4) This sample consisted of fifty hours of recorded, Standard Northern United States conversation. It amounted to, roughly, a quarter of a million words of recorded and transcribed material.

Again, at this point, the teaching outline directly follows the Teachers' Materials: Appendix pp. 98-109.

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Session 3

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Session 4

Aspectual Grammar (1)

The first thirty minutes of session four were spent in discussion, questions, and answers concerning Fresian grammar, Paul Roberts' Patterns of English, and other pertinent reading which the teachers had been doing.

Segmental Phonemes

Henry Lee Smith, Jr. (8), a descriptive linguist in the Bloomfieldian tradition, is the central figure in aspectual grammar.

First of all, it is necessary to recognize several important assumptions which underlie all work in descriptive linguistics, including aspectual grammar.

Assumptions

1. Speech is the beginning point in any study of language. Writing is a secondary system.
2. Language is arbitrary. It exists by the agreement of the group using it.
3. Language is systematic. It has a structure. This system or structure conveys meaning.
4. Each language has its own system or structure.
5. The sum of the structural features and the relationships among the features of a language are its grammar.

Aspectual grammar begins with the analyzation of the sounds of speech.

Definitions

Phonology: A term which includes phonetics and phonemics.

Phonetics: The science of all the vocal sounds which occur in the various language systems. The International Phonetic Alphabet (IPA) is a widely used legend for recording the sounds used in language systems. A phonetic transcription is an objective recording of the sounds of language without regard for their significance in the structure of any particular language.

When all the sounds of a particular language system are studied, it is discovered that any given language system:

1. Uses only selected sounds of the total range possible, or of that range used by speakers of other language systems.
2. Groups the sounds it does use into fifteen to sixty (1:38) selected, distinctive classes which contrast in meaning with one another.

Phonemics: The study of the distinctive classes of sounds of a given language.

The principle of contrast is one of the ways of determining phonemes. Linguists like to use minimal pairs to establish contrasts. A minimal pair is two minimal utterances which are alike except for one unit. "Pill" and "bill" constitute a minimal pair in English. They are alike except for the initial sound. In English this difference in initial sound establishes a contrast; or, in other words, to a native

speaker of English they are "different."

Phoneme: A single speech sound or a group of phonetically similar sounds which function as a distinctive unit in a given language.

Phonetically similar: The sounds share some feature or features of articulation which results, naturally, in a characteristic auditory effect.

The teachers should try the following exercise.

Directions: Hold a piece of paper before the lips. Say the word "pencil" so that the paper bounces and so that it does not.

Explanation: The paper bounces before an aspirated "p," but not before an unaspirated one. This difference is not significant in English. If it were, English would have two phonemes to represent the two significant sounds. Since it is not, we have one phoneme /p/.

Allophone: Careful examination of the phoneme /p/ in words such as "pin," "spin," and "tip" will reveal that /p/ in initial position is aspirated, in medial position is unaspirated, and in final position is unreleased. These are allophones of /p/. Allophones usually fall into such predictable positions. A native speaker of English would say that they were "the same." In Siamese (10:9), however, the initial aspirated /p/ and unaspirated /p/ do not "mean the same" to a native speaker. They represent two separate phonemes.

Classification of Phonemes of English

Phonemes are usually classified by point and manner of

articulation. By manner is meant:

1. Voiced or voiceless. If the vocal cords are vibrating the phoneme is voiced; if the vocal cords are relaxed the phoneme is voiceless.
2. Consonants are made by constricting or stopping the flow of air. If the air is shut off completely the consonant is a stop; if the air comes out noisily the consonant is a spirant or fricative.

Information concerning the points and manners of articulation of consonant phonemes was summarized in the teachers' materials (Appendix p. 111).

The chart of classification of consonant phonemes which is a part of an aspectual analysis of English (8) is also found in the teachers' materials (Appendix p. 112).

Vowels allow the air to flow freely through the mouth. However, the shape of the mouth affects the sound. The shape is primarily changed by the position of the tongue. The tongue moves in two dimensions: it may be high, middle, or low; and, it may be front, center, or back. Smith (8) uses the following diagram for the nine simple vowel phonemes in English. The chart is based on the position of the tongue.

	front	center	back	<u>key words</u>		
high	i	ɪ	u	pit	just (adv.)	put
mid	e	ə	o	pet	putt	gōnna
low	æ	a	ɔ	pat	pot	caught

Rounding also affects the shape of the mouth. In English the rounding only occurs in the back vowels, mostly in the /u/.

The most difficult vowel phonemes to distinguish are the /ɪ/ and the /o/. The /o/ does not occur in all dialects of English. It does occur in the coastal New England pronunciation of "home" and "road." The /ɪ/ is not a separate phoneme in all dialects. It can be illustrated with the following examples.

The shoes are Rosa's.	/rowzəʃs/
The roses are pretty.	/rowzɪz/

There are three glides in English: /y/, /w/, /h/.

These function as consonants before vowels and as semi-vowels after vowels. They join with the vowels to form complex vowel nuclei. There are 27 possible complex nuclei in English. No dialect uses all of them. A list of these, with the most common ones underlined, can be found in the teachers' materials (Appendix p.113). The reason for calling them glides is easily demonstrated. Notice the movement of

the tongue when the word "say" is said slowly; then when "yes" is said slowly.

The phoneme /r/ is sometimes classified as a fourth semi-vowel. It is almost impossible to make a general statement about /r/ that is valid for all speakers of English. It is formed differently in different dialects and by different speakers. The tongue is generally turned upward and tipped back; therefore, it is referred to as a retroflex semi-vowel. It displays very interesting behavior, but that lies beyond the scope of the present discussion.

Assignment: The teachers were asked to take home worksheets on phonemics (Appendix pp.113-114), fill in the blanks, and bring them to class the following week.

LITERATURE CONSULTED
Session 4

Sessions four, five, and six are all devoted to discussion of aspectual grammar. Therefore, the literature consulted will be found at the end of session six.

Session 5
Aspectual Grammar (2)

The first part of the session was spent reviewing the segmental phonemes.

1. The teachers compared their answers to the exercises assigned the previous week. It was pointed out that words in isolation are sometimes pronounced differently than the same words in running discourse.

It was decided that the following comparison would help identify the /ɹ/.

That's the gist of it. /ɹɪst/

It was said in jest. /ɹɛst/

The cause is just. /ɹʊst/

Wait just a minute. /ɹɪst/

2. The class enjoyed reading phonemic transcriptions from Gleason's (5) Workbook. (See Appendix p. 115)
3. The teachers discussed briefly the phonemic material they had found in the textbook series.

Suprasegmental Phonemes

Suprasegmental phonemes are said to "overlie" or "tie together" the segmental phonemes. Discussions of suprasegmental phonemes vary slightly; the presentation in this

class was based on the Trager-Smith (9) analysis of English.

There are twelve suprasegmental phonemes in English:
four phonemes each of stress, pitch, and juncture.

Stress phonemes

Stress phonemes are often referred to as accent or loudness in English.

There are four stress phonemes in English:

/ˈ/	primary
/ˌ/	secondary
/˙/	tertiary
/˘/	weak

Stresses are phonemic in English because native speakers identify as different two utterances which are alike except for the stress.

Examples: (8:6,11) Stress is always marked over the vowel.

the White House	the white house
lighthouse-keep̃r	light housekeep̃r
light housekeeper or light housekeeper	

Stress phonemes have grammatical significance; they serve as structural signals.

1. Stress phonemes identify certain constructions.

Examples:

Noun phrases:	round house	or	round house
	goose egg	or	goose egg

Compound nouns: round house

goose egg

A compound noun and a noun phrase in one sentence:

Long Island is a long island.

Two word verbs: set up hand out

Compound nouns: set up hand out

Verbs:	permit	Nouns:	permit
	conduct		conduct
	survey		survey

2. Stress phonemes delimit certain units.

All words in isolation have primary stress.

If two or more words are combined into a phrase one of the primary stresses must be reduced to at least a secondary stress.

Examples: (4:181)

goose, egg = goose egg or goose egg

black, bird, trap

blackbird, trap, black, birdtrap

blackbird trap or blackbird trap

black birdtrap or black birdtrap

more beautiful (plus) girls = more beautiful girls

more (plus) beautiful girls = more beautiful girls

The last two examples illustrate how stress can indicate two different constructions which otherwise look identical.

Pitch phonemes

There are four pitch phonemes in English. These pitches are relative. Although pitch /2/ varies from speaker to speaker, each speaker contrasts four different pitches.

/1/ low
 /2/ mid
 /3/ high
 /4/ extra high

An utterance usually begins on /2/.

A primary stress is often uttered on /3/.

An utterance often ends on /1/.

Like stress, pitch is phonemic in English because native speakers identify as different two utterances which are alike except for the pitch.

2 ^ ~ ~ ~ 3 ~ 1
 Sally's going to Paris

2 ^ ~ ~ ~ 2 ~ 3
 Sally's going to Paris

Not all questions end with /3/. Notice examples which have a question word at the beginning.

2 ^ ~ ~ ~ 3 ~ 1
 What are you doing

2 ^ ~ ~ ~ 3 ~ 1
 Where are you going

Notice that there is only one primary stress in each of the above examples and that the pitch is marked at the beginning of the utterance, at the end, and on the syllable which has primary stress. Each of these examples presents one intonation pattern, or phonological phrase. Juncture, the next topic, bounds phonological phrases.

Juncture

Juncture is more difficult to analyze than are the other suprasegmental phonemes. It is not to be thought of as pause. Pause often accompanies juncture, but pause is not the major characteristic of juncture.

There are four phonemes of juncture in English.

/+/- internal or plus juncture, also called open transition (4). This juncture breaks the phonemic flow.

night+rate or nitrate

I+scream or ice+cream

The other three juncture phonemes are phonological phrase markers. An intonation pattern or phonological phrase is bounded by one of the following juncture phonemes and contains only one primary stress.

/|/ - single bar. The pitch neither rises or falls; it is sustained.

2 \ \ \ \ \ 2 2 \ \ 1
The girl on the horse|is Martha #

/||/- double bar. The pitch is apt to rise slightly and is accompanied by more lengthening than the /|/.

2- ~2 2- ~ 2 2 2- ~ 1
Sally||my sister||is coming#

/##/ - double cross. This juncture phoneme is accompanied by lengthening, often by pause, and often by a drop to pitch /1/. It usually occurs at the end of a sentence, but may occur in the middle of a long sentence, usually between the subject and verb. See above examples.

The concluding examples of the session are in the teachers' materials (Appendix pp. 117-118).

LITERATURE CONSULTED
Session 5

See the end of session six.

Session 6

Aspectual Grammar (3)

(Outline of lecture given
by Henry J. Sustakowski)

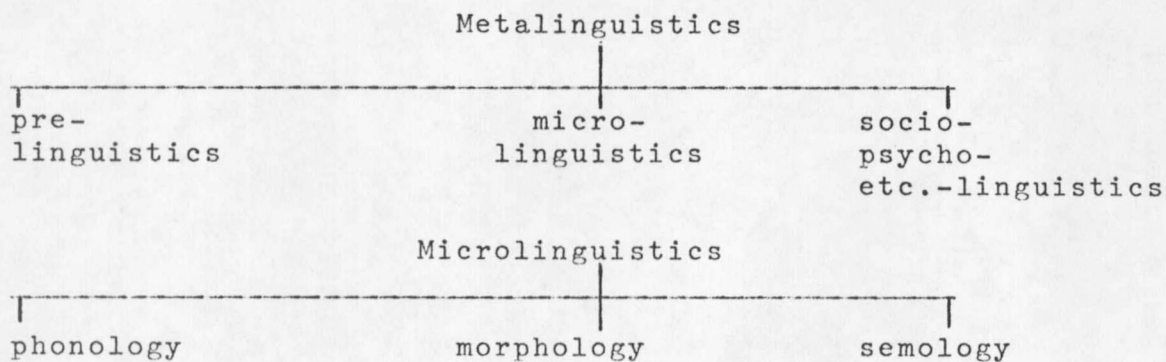
I. Stratificational and Aspectual Grammar

A. Relationship between the two grammars

1. Strata
2. Aspects

B. Schematic organization of aspectual grammar

1. Definitions
 - a. Metalinguistics
 - b. Microlinguistics
2. Levels of grammar
 - a. Phonology
 - b. Morphology
 - c. Semology
3. Relationships of levels



II. Morphology

A. Definition of morpheme

B. Kinds of morphemes

1. Base morphemes

a. Free

b. Bound

2. Prefixes

a. Kinds

b. Ordering

3. Suffixes

a. Homophonous morphemes

b. Inflectional

c. Derivational

C. Morphemic parts of speech

1. Criteria

2. Classification

III. Syntax

A. Syntactic parts of speech

1. Criteria

2. Classification

B. Syntactic relations

1. Relations within phonological phrases

2. Relations between phonological phrases

C. Formula of structure

IV. Buffalo English Linguistics Project

- A. Purpose: to test A Linguistics Approach to English, a one year language program written for high school students.
- B. Population: about 3000 students in the Buffalo public schools.
- C. Results: students displayed 300-600% growth in language sensitivity as tested by John Carroll's Modern Language Aptitude Test.
- D. Other results: ninth and tenth grade students progressed more rapidly than did older students.

LITERATURE CONSULTED
Session 6

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Session 7

Transformational Generative Grammar (1)

A transformational generative grammar is a grammar which incorporates both generative and transformational rules. Although it is possible to conceive of a grammar which would be purely transformational or purely generative, that is, only utilize rules of one type, the usual practice is to combine a set of generative rules and a set of transformational rules in one grammar. The name of such a grammar is often shortened to "transformational" and its proponents are called "transformationalists."

The major figure in transformational generative grammar since the publication of Syntactic Structures in 1957 (5) has been Noam Chomsky. Chomsky has not, however, been primarily concerned with constructing a grammar; his primary concern has been with the philosophical and theoretical postulates of such grammars. A limited examination of his published work (3;4;5;6;7;8) reveals the following philosophical assumptions which underlie work in transformational grammar.

Assumptions

1. All languages have a universal underlying grammatical structure. This underlying structure is called deep structure.

2. This deep structure reflects fundamental properties of the mind--the forms of thought.
3. This structure is innate; therefore, language is an innate property, waiting to be triggered.
4. Although the deep structure of all languages is fundamentally the same, the means of its expression, or the surface structures, may vary widely.

The following statement taken from Cartesian Linguistics (3:38-39) may serve as Chomsky's definition of transformational generative grammar. It also indicates the linguistic tradition with which he identifies.

[Transformational generative grammar] is concerned precisely with the rules that specify deep structures and relate them to surface structures and with the rules of semantic and phonological interpretation that apply to deep and surface structures respectively. . . . In many respects, it seems to me quite accurate . . . to regard the theory of transformational generative grammar, as it is developing in current work, as essentially a modern and more explicit version of the Port-Royal theory.

At this point many students asked questions concerning transformational grammar and its philosophy. Some of the questions pertained to the ideas which were presented above and others were random questions which reflected some contact with educational journal and popular press articles concerning Chomsky and/or transformational grammar.

Two Sample Grammars

In order to become familiar with numerous features of transformational syntax and to gain understanding of the

manner in which such a syntax is stated, this class examined two sample "grammars," the first generative and the second transformational generative. Both grammars are primarily concerned with syntactic rules, although, as the above statement from Chomsky indicates, transformational theory refers to a theory of language which includes phonology, syntax, and semantics. However, up to this time, the transformationalists have concentrated their effort primarily in the development of syntax, especially that of English. Also, in the current textbook series the application of transformational grammar is to the study of sentence construction.

The two sample grammars were constructed by Gleason (9) for illustrative purposes and represent the clearest explanation of transformational generative syntax on a restricted scale that this author was able to find.

Since Gleason himself is not a transformationalist it is not surprising that his grammars differ from accepted transformational practice at several points. However, these points are few, will not deter this class from gaining an understanding of the way in which such a grammar operates, and will be pointed out in session nine.

Definition

"A grammar [syntactic] is a finite set of rules which enumerates (or generates) an infinite number of

grammatical (or well-formed) sentences of a language and no ungrammatical ones and assigns to each sentence generated its proper structural description" (11:4).

A Sample Generative Grammar

The sample grammar presented in this session (Appendix p. 121) consists of P-rules, L-rules, and M-rules.

P-rules

Generative rules which are often called phrase-structure or constituent structure rules (1:35) are the first rules to be applied in the grammar. S is the starting place. The symbol, $\longrightarrow$, means "rewrite." Notice that only one symbol is rewritten at a time. The brackets enclose alternate rewrite choices. Any one of alternate choices can be selected at any time the rule is applied. It is possible to apply some P-rules (P9, P13, P14, P16) more than once; these rules are called "recursive." Recursive rules make it possible to generate sentences of infinite length. The rules must be applied until they can be applied no longer, or until the symbols which remain are "terminal" symbols. A terminal symbol is one which never appears to the left of a rewrite arrow. The symbols are arbitrary (any symbols could be used), but are highly suggestive of terms used in traditional grammar. Bach (1:51) states, in fact, that they "should be

chosen with a view to mnemonic value. . . ."

L-rules

When P-rules can no longer be applied L-rules--lexical rules--replace the symbols with lexical items. The L-rules in this grammar are very limited.

M-rules

After the L-rules have been applied, M-rules--usually referred to as "morphophonemic" rules--combine the lexical items and affixes. The M-rules in the sample grammar are merely suggestive of the way in which M-rules operate.

Operation of the Grammar

The best way to become familiar with the way in which the grammar operates is to work examples with it. The following example was worked out step by step on the black-board.

Example

P-rules

S
P₁ NP + VP

P₂ NP + -ed + V₃

P₄ NP + -ed + V₂

P₅ NP + -ed + be + -ing + V₁

P₆ NP + -ed + be + -ing + V-i

P₉ Det + N₂ + -ed + be + -ing + V-i

P₁₃ Det + AP + N₂ + -ed + be + -ing + V-i

P₁₃ Det + AP + N₁ + -ed + be + -ing + V-i

(In applying this recursive rule the second time, the alternate AP + N₂ could have been chosen again.)

P₁₄ Det + AP + N-c + -ed + be + -ing + V-i

P₁₆ NP + -'s + AP + N-c + -ed + be + -ing + V-i

P₉ Pr + -'s + AP + N-c + -ed _ be + -ing + V-i

P₁₇ Pr + -'s + Adj + N-c + -ed + be + -ing + V-i

L-rules

he + -'s + old + dog + -ed + be + -ing + sleeping

M-rules

His old dog was sleeping.

(Rules of punctuation and capitalization would have to be worked out in a detailed grammar, but are simply assumed here.)

The process of developing a sentence by application of P-rules is usually called a derivation (1;11). This derivation provides a structural analysis of the sentence for it "tells us precisely how a sentence was constructed. . . ." (11:15). One diagrammatic way of presenting this structure is a tree diagram, often called a labeled or branching tree diagram or simply a derivational tree.

The derivational tree for the above example (Appendix p. 123) shows that the principal constituents of the sentence, S, are an NP and a VP, or in traditional terminology, a noun phrase and a verb phrase. The constituents of the noun phrase are a possessive pronoun, an adjective, and a common noun. It is readily apparent that the possessive pronoun modifies both "old" and "dog," Thomas (14) believes that such structural diagrams revealing the grammatical relationships within a sentence might serve important pedagogical purposes.

Assignment

1. Develop an example using the sample grammar.
2. Continue examination of textbooks. Read sections which draw upon transformational grammar.

LITERATURE CONSULTED
Session 7

See end of session nine.

Session 8

Transformational Grammar (2)

A Sample Transformational Generative Grammar

T-rules

T-rules--transformational rules--are the only new type of rule in the sample grammar presented in this session (Appendix pp. 124-128). These rules are applied between the L-rules and the M-rules. They are ordered rules which means that they must be applied in sequence. The designations OPT and OBL indicate if the application of the rule is optional or obligatory. The designation GEN indicates optional T-rules in which two individual P-strings are combined into one sentence. (A string is simply one or more P-symbols joined by plus marks. Each symbol is said to be an element in the string.) The symbols X, Y, and Z designate an element or elements present in the P-string which do not need to be specifically identified. The X, Y, and Z within parens indicates that such an element or elements may or may not be present. The numerals below the symbols are used for identification of elements. The small f identifies structural elements which are a necessary part of the transformation.

P-rules

The only new symbol in the P-rules is §. This symbol stands for an empty slot which must be filled during the

operation of a T-rule. The parens indicate optional elements. In P_3 , for instance, "not" may or may not be added to the alternate choices.

L-rules.

The L-rules are incomplete, but are suggestive of the lexical elements which could be a part of this grammar.

M-rules

No M-rules were included in this grammar. They will be assumed.

Agreement

The sample grammar presented in session seven eliminated the problem of agreement by only generating sentences with singular subjects and verbs. Any attempt to accommodate agreement in that grammar must be introduced at the very beginning of the P-rules because the NP and VP develop independently. P_1 might be restated as follows:

$S \longrightarrow NP_{sg} + VP_{sg}$ $NP_{pl} + VP_{pl}$	(This, of course, assumes the complete regularity of number and a simple two-way system.)
---	---

Such a rule, however, necessitates almost two parallel grammars and results in much overlapping. It is much simpler to handle agreement in a grammar which utilizes

transformational rules (1).

In the sample grammar presented in this session agreement is introduced in P-rules 3, 7, and 8.

$$P_3 \quad \text{PreV} \longrightarrow \left\{ \begin{array}{l} \$No + -s + \$Aux \\ \$No + -ed + \$Aux \\ \text{Mod} \end{array} \right\} \quad (+ \text{ not})$$

$$P_7 \quad NP \longrightarrow N_6 + No$$

The "No" and the "\$No"
are both number markers.

$$NP_s \longrightarrow N_6 + \$No$$

$$P_8 \quad No \longrightarrow \begin{array}{l} sg \\ pl \end{array}$$

Example 1 on the following page was worked on the blackboard to illustrate the way in which the above rules and the application of T_2 , an obligatory T-rule, result in subject-verb agreement.

Example 1P-rules

P₁ NP + VP

P₂ NP + Pre + V₃

P₃ NP + \$No + -s + \$Aux + V₃

P₄ NP + \$No + -s + \$Aux + V₂

P₅ NP + \$No + -s + \$Aux + V₁

P₆ NP + \$No + -s + \$Aux + V-t + NP + -m

P₇ N₆ + $\begin{array}{c} \text{---} \\ | \text{No} | \\ | \end{array}$ + \$No + -s + \$Aux + V-t + NP + -m

P₈ N₆ + $\begin{array}{c} | \text{sg} | \\ | \end{array}$ + \$No + -s + \$Aux + V-t + NP + -m

P₉ N-prop + $\begin{array}{c} | \text{sg} | \\ | \end{array}$ + \$No + -s + \$Aux + V-t + NP + -m

P₇ N-prop + $\begin{array}{c} | \text{sg} | \\ | \end{array}$ + \$No + -s + \$Aux + V-t + N₆ + No + -m

P₈ N-prop + $\begin{array}{c} | \text{sg} | \\ | \end{array}$ + \$No + -s + \$Aux + V-t + N₆ + pl + -m

P₉ N-prop + $\begin{array}{c} | \text{sg} | \\ | \end{array}$ + \$No + -s + \$Aux + V-t + Pr + pl + -m

L-rules

Peter + $\begin{array}{c} | \text{sg} | \\ | \end{array}$ + \$No + -s + \$Aux + visit + he + pl + -m

(The derivation tree of the above example is found in the teachers' materials (Appendix p. 129), labeled Derivation Tree 1.)

The next rule to be applied is T_2 .

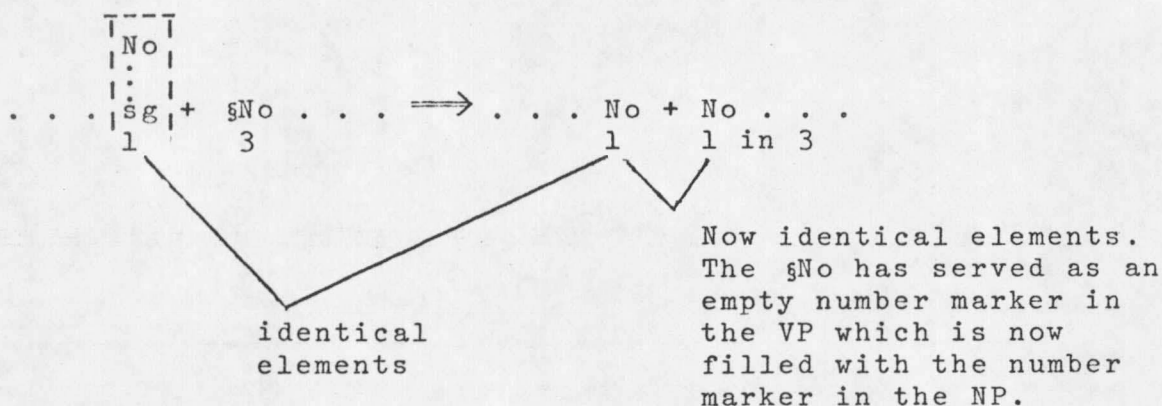
$$\begin{array}{ccccccc} \text{No} & + & (\text{X}+) & \text{\$No} & \Longrightarrow & \text{No} & + & (\text{X}+) & \text{No} \\ 1 & & 2 & 3 & & 1 & & 2 & 1 \text{ in } 3 \end{array}$$

It has been stated that the left side of a T-rule designates the form of the P-string upon which the rule operates. However, in the example above the "No" has been replaced by "sg." This problem is solved by a convention of the grammar: any symbol in a T-rule stands for itself or for any symbols which have replaced it. This means that the derivation of the P-string must be known in order to apply T-rules. Dotted lines enclose that part of the example to which this convention is presently being applied. This part of the string is said to be "dominated by" No.

The numerals below the transformational rule identify its elements. The numerals could be placed below the example string as follows:

$$\begin{array}{ccccccc} \overline{\text{No}} & & & & & & \\ | & : & | & & & & \\ \text{Peter} & + & \text{sg} & + & \text{\$No} & + & \text{-s} & + & \text{\$Aux} & + & \text{visit} & + & \text{he} & + & \text{pl} & + & \text{-m} \\ 1 & & 3 & & & & & & & & & & & & & & \end{array}$$

All elements preceeding and following the elements in the rule can be ignored for the moment.



After T_2 is applied the string reads:

Peter + sg + sg + -s + \$Aux + visit + he + pl + -m

After T_8 is applied to delete the \$Aux (this will be discussed below), application of the M-rules would produce the sentence:

Peter visits them.

Agreement between subject and predicate nominative is achieved in the same manner. Using the sample grammar it is possible to generate the following string: (See Appendix p. 130, Derivation Tree 2.)

Example 2

Husband + pl + \$No + -s + \$Aux + be + man + \$No

The application of T_2 fills both number slots.

Husband + $\begin{bmatrix} \text{No} \\ \vdots \\ \text{pl} \end{bmatrix}$ + §No + -s + §Aux + be + man + §No

No §No
1 3

No X §No
1 2 3

Husband + pl + pl + -s + \$Aux + be + man + pl

After T_8 deletes the $\$Aux$ and the M-rules have been applied, the final form of the sentence is:

Husbands are men.

The Passive Transformation

The application of T_1 , an optional T-rule, produces a passive sentence. Example 1 can be developed into a passive sentence.

Example 3

T_1

Peter + sg	+ \$No + -s + \$Aux	+ visit	+ he + pl	+ -m
NP 1	+ X 2	+ V-t 3	+ NP 4	+ -m 5

 $\Rightarrow$

he + pl	+ \$No + -s + \$Aux	+visit	+ Peter+sg	+ -m	
NP 4	+ X 2	+be+-en f f	+ V-t 3	+by+ NP + f 1	-m 5

Application of the obligatory T_2 then produces

he + pl + pl + -s + $\$Aux$ + be + -en + visit + by + Peter + -m

T_8 would delete the $\$Aux$, and the application of M-rules would produce

They are visited by Peter.

Notice that the subject in the original sentence was singular; the subject in the passive sentence is plural. Therefore, to be certain that the subject and verb agree, it is mandatory that the agreement rule follow the passive rule.

The passive sentence is longer than the corresponding sentence in the active voice. The optional application of T_3 will delete the passive agent when the operator of the grammar so desires. The sentence would then be: "They are visited." Other examples might be

The bank was robbed by the robbers. $\implies$ The bank was robbed.

The cookies were eaten by the fathers. $\implies$ The cookies
were eaten.

The condition "by from T_1 " eliminates the possibility that such sentences as "The music was by the Awful Screammers" would be shortened to "The music was."

Deletion transformations are used in transformational

grammars to produce various types of short utterances.

Happy birthday.

Good thinking.

Hit the ball.

You fool!

The deleted elements in these transformations resemble the "understood" elements used to explain sentence fragments in traditional grammar.

Questions

The split verb in "Will you see John?" poses many problems when developed in the P-rules. However, with the distinction which the P-rules make between PreV and V_3 the question is easily produced by application of T_5 .

NP + PreV + V_3			$\longrightarrow$	PreV + NP + V_3		
1	2	3		2	1	3
you	will	see John		will	you	see John

Other types of questions are produced by the application of T_6 and T_7 .

Who will see John?

or

Whom will you see?

Auxiliaries

The major purpose of the \$Aux is to facilitate the production of sentences which do not use the modal "will." Several examples may serve to illustrate this.

Example 4

If, after applying T_2 , the string should be:

Peter + sg + sg + -s + \$Aux + be + -ing + visit + he + pl + -m

application of T_4 ($\begin{matrix} & \$Aux + be \Rightarrow be \\ 1 & 3 & 3 \text{ in } 1 \end{matrix}$) would produce

Peter + sg + sg + -s + be + -ing + visit + he + pl + -m
 Peter is visiting them.

If T_5 is applied to the string the corresponding question is produced.

Is Peter visiting them?

If the \$Aux immediately preceeds a V_1 in the string, T_8 deletes it. This was done previously in the example which produced "Peter visits them."

If, however, the \$Aux cannot be deleted by T_8 it is filled with "do" by T_9 .

Example 5
(from Example 1)

In this example "not" has been inserted (from P_3) between the $\$Aux$ and the V_1 .

Peter + sg + sg + -s + $\$Aux$ + not + visit + he + pl + -m
 T_9 Peter + sg + sg + -s + do + not + visit + he + pl + -m
 Peter does not visit them.

Example 6
(from Example 1)

Peter + sg + sg + -s + $\$Aux$ + visit + he + pl + -m
 T_5 sg + -s + $\$Aux$ + Peter + sg + visit + he + pl + -m
 T_9 sg + -s + do + Peter + sg + visit + he + pl + -m
 Does Peter visit them?

This use of a slot to accommodate the presence of "do" before negatives and at the beginning of many questions still does not account for the use of "do" for emphasis.

Peter does visit them.

An instructive exercise would be to explore ways in which this use of "do" might be written into the grammar.

Assignment

Develop examples using the sample grammar. Note: one of the poorest features of the grammar is that it does not provide for agreement between determiners and nouns.

Continue examination of textbooks.

LITERATURE CONSULTED
Session 8

See the end of session nine.

Session 9

Transformational Generative Grammar (3)

Generalizing Transformations

Transformational rules are either single-base or double base (11:231) transformations.

1. Single-base transformations are those which operate on only one P-string at a time. In the sample grammar presented in session seven (Appendix pp. 121-122) this includes all T-rules marked OBL or OPT.
2. Double-base transformations operate on two P-strings at once. They are marked GEN in the sample grammar.

The GEN transformation rules will fill the three noun modifier slots introduced into the P-rules: \$PNM, \$Poss, and \$AP.

1. A filler for the string containing the slot is extracted from another string. The string containing the slot is called the "matrix sentence"; the string providing the filler is called the "constituent sentence" (1:75, 11:307). For convenience the matrix sentence has been reduced to the noun phrase which will receive the modifier.
2. The T-rules specify the requirements of the matrix and constituent sentences. The most usual requirement is that certain elements of the two combining strings must be identical.

Examples illustrating the operation of the GEN rules are in the teachers' materials (Appendix pp. 132-135).

Differences Between the Sample Grammar
and Other Transformational Grammars

The differences between Gleason's sample transformational grammar and those usually written by transformationalists are minor when it is remembered that the purpose of this class was a limited, pedagogical one. The most obvious differences appear to be influenced by tagmemics (12; 13).

1. In the slot-and-filler technique each constituent of a sentence is thought of as both a function and a word which fulfills that function. The syntactic relationship between the "slot" and the "filler" is called a tagmene (12:63). The following example illustrates this technique.

English has many noun modifiers which may precede or follow the noun head; however, these modifiers occur only in ordered positions.

Slots:	N-5	N-4	N-3	N-2	N-1	N	N+1	N+2
Fillers:	Det	Num	Int	Adj	nouns	noun	adv	prep. phrase
Ex:	The	two	very	old	weiner	buns	there	in the breadbox

It is easy to follow the choices of the above slots through the P-rules of the sample grammar. Koutsoudas (11:161) states that such rewriting of one non-terminal P-symbol into another is justified only if the symbol is needed for a T-rule.

2. The introduction of empty slots in the P-rules was, at one time (1:11), accepted practice. However, it is seldom used today.
3. P-rules in a transformational grammar are usually context-sensitive and ordered. This eliminates the recursive element in the P-rules. The recursive

power of the grammar then lies in the generalizing transforms.

4. The lexicon is generally contained in the P-rules, not in separate lexical rules (Appendix p. 136).

A sample grammar from a transformational grammar textbook may be found in the teachers' materials (Appendix p. 136).

Transformational Grammar and the Classroom

At present there are two particular areas in which transformational grammar holds promise for aiding classroom teachers. One lies in the teaching of sentence construction, the other in research into the language development of children.

- I. Transformational grammar offers insight into the ways in which several simple statements can be woven into one complex statement. Pedagogical applications of the principles of generalizing transformations might help students develop the capacity to handle ideas more efficiently.

- A. Students might better develop a critical capacity for analyzing ideas in written passages.

- B. Students might better learn to manipulate ideas in their own writing.

Discussion

The above statements led directly into a lively class discussion of the transformational grammar in various textbooks.

II. Transformationalists have been much concerned with the acquisition and development of language competence.

A. In one study of language acquisition Brown and Bellugi (2) used transformational grammar to analyze the progressive differentiation of syntactic classes by two children. An example of this analysis follows.

1. At the beginning of the study the rules for generating a noun phrase were:

NP $\longrightarrow$ M + N
 M $\longrightarrow$ a, big, dirty, little, more, my,
 poor, that, the, two
 N $\longrightarrow$ Adam, Becky, boot, coat, coffee,
 knees, man, Mommy, sock, toy . . .

2. 16 weeks later:

NP $\longrightarrow$ (Dem) + (Art) (+ M) + N
 Dem $\longrightarrow$ that
 Art $\longrightarrow$ a, the
 M $\longrightarrow$ big, dirty, little . . .
 N $\longrightarrow$ Adam, Becky, boot . . .

3. 26 weeks later:

M had, by this time, been divided into five classes: article, descriptive adjective, possessive pronoun, demonstrative pronoun, and a residual class.

B. More immediately pertinent to teachers is Kellogg W. Hunt's study concerning Grammatical Structures Written at Three Grade Levels (10). The discussion of related research and of the particulars of the research at hand is excellent throughout this study.

1. Population:

- a. Fifty-four boys and girls, nine of each sex in grades four, eight, and twelve.
- b. Pupils of the Florida State University Laboratory School.
- c. I.Q. scores between 90 and 100.

2. Sample:

The first thousand words written by each pupil in the classroom under normal assignment procedures.

3. The first problem in the analysis was to develop a criteria to determine maturity in writing.

a. The first proposed criteria was average sentence length.

(1) A sentence was defined as each unit which began with a capital letter and ended with a period.

(2) Average sentence length did increase with grade level, but was a poor indicator of individual maturity.

(3) Younger children underpunctuate and use too many "ands." Fourth graders used 574 coordinators between main clauses; eighth graders used 284, and twelfth graders used 172.

b. The second proposed criteria was average clause length.

(1) A clause was defined as "a structure with a subject and a finite verb."

(2) Average clause length did increase, but there was much overlapping of the three grade levels.

c. The third proposed criteria was the ratio of subordinate clauses to main clauses. Again there was some increase at progressive grade levels, but much overlapping.

d. Hunt then proposed that a unit be devised which would take into account both growth in clause length and in the number of subordinate clauses per main clause. This unit was called the "T-unit."

- (1) The T-unit contains one main clause with all its subordinate clauses.
 - (a) Each unit would be grammatically capable of being considered a sentence.
 - (b) These units are, in fact, the shortest grammatically allowable sentences into which the material could be segmented.
 - (c) These units destroy main clause coordination--already shown to be a sign of immaturity rather than of maturity.
 - (2) T-unit length increased significantly from one grade level to the next.
 - (a) Fourth graders averaged 8.6 words per T-unit.
 - (b) Eighth graders averaged 11.5 words per T-unit.
 - (c) Twelfth graders averaged 14.4 words per T-unit.
 - (3) There was still a slight overlapping of grade levels, but much more clustering within each grade level.
4. The T-unit lengths of each grade level were compared.
- a. Younger students wrote more short T-units (less than 9 words).
 - (1) Fourth graders wrote 1,318.
 - (2) Eighth graders wrote 620.
 - (3) Twelfth graders wrote 296.
 - b. The three groups wrote about the same number of middle length T-units (9-20 words).

- c. Twelfth graders wrote twice as many long T-units (over 20 words) as eighth graders and three times as many as fourth graders.
- 5. At the same time that the length of T-units increased, the ratio of T-units per punctuated sentence decreased. The question posed was, "Where does the growth take place?"
 - a. Growth takes place in the number of subordinate clauses within T-units. All grade levels produced adverb, noun, and adjective clauses with ease; however, the number of each type of clause did not increase at the same rate.
 - (1) Adverb clauses increased slightly.
 - (2) Noun clauses showed steady, moderate increases.
 - (3) Adjective clauses displayed steady, dramatic increases.
 - (a) Fourth graders produced .045 adjective clauses per T-unit.
 - (b) Eighth graders produced .090 adjective clauses per T-unit.
 - (c) Twelfth graders produced .16 adjective clauses per T-unit.
 - b. Frequency of non-clause modifiers also increased significantly.
 - (1) Non-clause modifiers would not increase T-unit length as adjective clauses would.
 - (2) Non-clause modifiers would increase the conciseness of information--an important part of language growth.
- 6. Increases at the several grade levels in the use of various syntactic features can be explained by increased utilization of T-rules.

- a. The syntactic features which contribute to the increased length of T-units are primarily the result of embedding transformations.
 - b. The syntactic features which show the most significant increments from grade to grade can be explained by application of deletion rules (rather than by substitutions or additions).
7. Hunt expanded his study by analyzing the first thousand words of nine articles each from Harpers and the Atlantic.
- a. In this sample of "superior" adult writing clause length, rather than T-unit length, was the best indicator of maturity.
 - b. The increase in the number of adjective clauses remained a valuable index of mature writing.
 - (1) The likelihood that a fourth grader will embed an adjective clause is 1 in 20.
 - (2) The likelihood for a "superior" adult is 1 in 4.

Studies such as Hunt's reveal that flexibility and complexity indicate language maturity. It is reasonable to postulate that it is not the use of various sentence patterns, but what is done within sentence patterns to achieve complexity and flexibility that is of utmost importance in developing mature writing.

It is also reasonable to postulate that data concerning language acquisition and development is relevant to the writing of reading textbooks, the analysis of language and

literature, and the development of student writing.

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Session 10

The Role of Linguistics in the Classroom

This course has been focused primarily on the explication of three grammars--Fresian, aspectual, and transformational-generative. This is not to say that these grammars comprise all of linguistics (or even all of the "linguistic" grammars) or that grammar is the most important aspect of linguistics. It is not. The most important aspect of linguistics is the linguists' attitude toward language. They consider language, even the native tongue, a fit object of systematic study. They have not tread fearfully in such study either. They continually hypothesize, test, and revise; they continually dare to dream of new aspects of language study.

Linguistics is a large and rapidly growing body of knowledge involving both fundamental theory about language in general and research on individual languages. It is no more reasonable to demand that all of linguistics be "covered" in one course than to demand that all of literature be "covered" in one course. Nor is it possible to say all there is to be said about the role of linguistics in the classroom in one session. Unfortunately, the answer cannot be had simply by asking, "Which grammar should be taught?" The answer is much more subtle and complex.

Linguistics is being applied to two facets of classroom teaching: to the direct study of language and as an integral part of the study of literature.

- I. One of the proper concerns of the English classroom is the study of language, particularly the English language. Linguistics can contribute much to enrich and broaden this study, especially when coupled with new conceptions of the educative process (1).

The teaching of language should not be of a helter-skelter, hit or miss nature, but should comprise a coherent, structured program which would introduce students to the methods of studying language as well as to the findings of scholarly language study.

In the 'teachers' materials (Appendix p. 139) is a list of objectives and some of the materials of what Francis (6) would consider an adequate program in the English language for the average high school student. The list is supplemented by a pertinent statement by Gleason (8) concerning the nature of language study. This material was used as a springboard for class discussion concerning the nature of language study in the elementary and secondary school.

- II. Another concern of the English classroom is literary analysis. Two examples of ways in which linguistics may contribute to literary analysis were presented to the class.

- A. The first example concerned two things already familiar to teachers: dialect and The Catcher in the Rye (11).

1. Costello (4) characterizes Holden's language as authentic prep school dialect with personal idiosyncrasies.

- a. Characteristics of authenticity

- (1) Holden's use of swear words is essentially meaningless.

(a) "Hell" is part of his favorite simile. He says "hellava time" to mean a good time, and yet says "sad as hell" or "hot as hell," "pretty as hell" or "ugly as hell."

(b) "Goddam" (or "damn") is his favorite adjective. It has no relationship to its original meaning. It shows the same lack of meaning as "hell." A "goddam hunting cap" is a good one, "ya goddam moron" is bad, and "goddam windows" is an indifferent reference.

- (2) Costello (4) catalogued over 100 slang terms. These were also used in an imprecise manner. He totaled seven different meanings for the word "crap."

foolishness -- "all that David Copperfield kind of crap."

mess -- "I spilled some crap all over my gray flannel."

miscellaneous -- "I was putting on my galoshes and crap."

animal excreta -- "dog crap"

unfavorable -- "The show was ... crappy."

untrue -- "a lot of crap"

to chat -- "shoot the crap"

At times this identical expression means to lie.

- (3) Holden admits to having a "lousy vocabulary."

(a) Adjectives and adverbs are constant repetitions of a few favorite words: "lousy," "crumby," "terrific," "quite," "old," "stupid."

- (b) He achieves emphasis by piling one trite adjective upon another.
- (4) Holden displays the common American characteristic of adaptability of parts of speech.
 - (a) Nouns become adjectives: "per-
verty," "Christmasy"
 - (b) Nouns become adverbs: "She sings
it very Dixieland and whorehouse."
 - (c) Parts of speech are combined:
"blue butt-twitcher of a dress"
- (5) The levels of usage can be identified in Holden's language.

school boy conversation: "take a leak"
 public usage: "relieve himself"
 usage when addressing the reader is
 often over-corrected: "with he
 and I"

b. Characteristic idiosyncrasies

- (1) It is common for teenagers to end a sentence with a dangling construction; Holden overdoes this characteristic, often ending sentences with "or something," "or anything," "and all."
- (2) Holden often insists that he is not a phony.

"It really is." "It really does."

2. Students can verify Costello's observations.

- a. They can examine Holden's language objectively.
- b. They can observe the speech behavior of actual people.

- (1) Do students and teachers use different dialects with different audiences?
- (2) Do students have characteristic idiosyncrasies?
- (3) Is Holden's overuse of a few imprecise adjectives characteristic of teenage speech?

B. The second example of ways in which linguistics can contribute to literary analysis was suggested by Whitehall and Hill's (12) report of a seminar which re-examined "English metrics in the light of phonemic theory."

1. The seminar concluded that there are two metrical forms practiced in English.
 - a. Isosyllabic verse, first seen in Chaucer, is a borrowed form which counts syllables.

from "The Complaint of Chaucer
to his Empty Purse"

To you, my purse, and to non other wight
Compleyne I, for ye be my lady dere!
I am so sorry, now that ye be light;
For certes, but ye make me heavy chere,
Me were as leef be leyd up-on my bere;
For whiche un-to your mercy thus I crye:
Beth hevy ageyn, or elles mot I dye! (4:187)

- b. Isochronous verse "which represents the native English tradition" is composed of "time units of the same length, marked off, not into feet, but into juncture units." (12:497)

- (1) This type of verse receives its name from a basic phonetic characteristic of English discovered by Pike (10:34): in English the time lapses between primary stresses are "more or less equal."

The teacher|is interested|in buying|
some books #

Bí| báttles| are foug|ht| dáily #

- (2) Isochronus verse may be metrically analyzed by marking its junctures and primary stresses. Excellent interpretive reading depends much on skillful use of junctures and stress variations.

from "Get Up and Bar the Door"

It fell|² about the Martimas tíme #
 And a gáy tíme| it wás thên| |
 When our good wife| got puddings to máke|
 And she's bóild them| in the pán # (8)

- (3) Using Cummings' (6) "anyone lived in a pretty how town," the students ended the session by experimenting orally with juncture and stress variations.
 (Appendix p.

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Session 10

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III

SUMMARY

III

New textbook series in English which present "linguistic" grammar primarily draw their content from aspectual phonology, Friesian form classes and sentence patterns, and transformational P-rules and T-rules. This inservice class in linguistics was organized so that the major portion of the lecture content concerned those areas of linguistics.

The course did not overlook the fact that there are other aspects of linguistics which have relevance to the English classroom; several which were mentioned are the history of the language, dialects, attitudes toward the study of language, and methods of studying language.

The major portion of the students' work outside the class was devoted to examining textbooks to determine what linguistic material they contained and how it was organized. The students were also encouraged to consider the relevance of such material to the study of the English language. Class time was then allowed for sharing and discussing the students' reading and thinking.

The major conclusion of the study was that a knowledge of linguistics can deepen and broaden the teachers' understanding of language.

IV

APPENDIX

Teachers' Materials

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Session 1

I. The Greeks

A. The "natural" school

1. Rules of grammar
2. Linguistic change
3. Classical language
4. Study of classics

B. The "conventional" school

1. Language change
2. Rules of grammar
3. Relative value of language development

C. Examination of the Greek language

1. Parts of speech and grammatical principles.
 - a. Plato
 - b. Aristotle
2. Formal grammars
 - a. Dionysius Thrax: Téchnē grammatickē
 - b. Apollonius Dyscolos

II. The Romans

A. Donatus

B. Priscian

III. The middle ages

A. Pedagogical grammars

1. Donatus and Priscian
 2. Alexander de Villiedieu: Doctrinale
 - a. Written in verse
 - b. Current Latin usage
 - c. Syntax
 3. Aelfric: Latin Grammar
 - a. Based on Priscian and Donatus
 - b. Applicability to Old English
- B. Speculative grammars
- IV. Sixteenth and seventeenth centuries
- A. Growing interest in language
 - B. Pedagogical European grammars
 - C. General grammars
- V. Late seventeen hundreds
- A. Rise of "school" grammar
 1. Robert Lowth: A Short Introduction to English Grammar
 - a. Authoritarian
 - (1) Rules
 - (2) Correct examples
 - (3) Incorrect examples
 - b. Criteria
 - (1) Universal and Latin grammar
 - (2) Literary authors

(3) Other grammarians

2. Lindley Murray: English grammar adapted to the different classes of learners

a. Organization

(1) Orthography

(2) Etymology

(3) Syntax

(4) Appendix

b. Popularity

3. Changes in school grammar until 1900

a. Stephen Clark

b. Reed and Kellogg

B. Rise of "scholarly traditional grammar"

1. Henrik Poutsma

2. Etsko Kruisinga

3. Otto Jespersen

C. Rise of modern linguistics

1. Discovery of Sanskrit

2. Study of Indian grammars

a. Phonetics

b. Grammatical analysis

(1) Word formation

(2) Economy of rules

3. Reconstruction of PIE

a. Examinations and comparisons of languages

(1) Rask

(2) Bopp

b. Sound laws

(1) Grimm

(2) Verner

VI. Twentieth century linguistics in the United States

A. Linguists

1. Boaz

a. Field worker

b. Teacher

2. Sapir

a. Phoneme concept

b. Language - 1921

3. Bloomfield

a. Historical linguistics

b. American Indian languages

c. Language - 1933

B. American Indian languages

1. Recording

2. Analyzing

Word Class System of Dionysius Thrax,
Second Century B.C.

Quoted from: R.H. Robins, A Short History of Linguistics.
Bloomington: Indiana University Press, 1967. pp. 33-34.

ónoma (noun): a part of speech inflected for case, signifying a person or a thing,

rhēma (verb): a part of speech without case inflection, but inflected for tense, person, and number, signifying an activity or process performed or undergone,

metochē (participle): a part of speech sharing the features of the verb and the noun,

arthron (article): a part of speech inflected for case and preposed or postposed to nouns,

antōnymiā (pronoun): a part of speech substitutable for a noun and marked for person,

prothesis (preposition): a part of speech placed before other words in composition and in syntax,

epirrhēma (adverb): a part of speech without inflection, in modification of or in addition to a verb,

syndesmos (conjunction): a part of speech binding together the discourse and filling gaps in its interpretation.

Session 2

STAGES OF ENGLISH

700 A.D.

Thu ure Fader, the eart on heofenum
 Si thin noman gehālgod,
 Tō becume thin rīke,
 Si thin Willa on Eorþan twa on heofenum;
 Syle us today orne daegwanlican hlaf,
 And forgif us ure gylter,
 Swa we forgifath tham the with us agylthat;
 And ne laed thu na us on kostnunge;
 Ac alys us from yfele. Si bit swa.

890 A.D.

Faeder ure thu the eart on heofenum,
 Si thin name gehalgod;
 To becume thin rice.
 Gewurthe thin willa on earþan swa swa on
 heofenum,
 Urne daeghwamlican hlaf syle us to daeg;
 And forgyf us ure gyltas, swa swa we for-
 gifath urum gyltendum;
 And ne gelaedde thu us on costnunge,
 Ac alys us of yfele. Sothlice.

1120 A.D.

Ure Fader in Heven rich,
 Thy name be halyed ever lich.
 Thou bring us thy michel blisse,
 Als bit in heven y. doe;
 Evear in yearþ been it alsoe.
 That holy brede that lasteth ay,
 Thou send us this ilke day.
 Forgive us all that we have done
 As we forgive ech other one.
 Ne let us fall into no founding,
 Ne sheld us frym the foule thing.

1390 A.D.

Oure Fadir that art in heavens, halwid be thi
 name; thi hyngdom cumme to; be thi wille don
 as in heven and in erthe; gif to us this day
 oure breed ouer other substaunce; and for-
 geve to us oure dettis, as we forgeve to oure
 dettours; and leede us nat in to temptacioun,
 but delyvere us fro yvel. Amen

Modern English: The King James Bible

1611 A.D. Our Father which art in heaven, Hallowed
 be thy name.
Thy kingdom come. Thy will be done in
 earth, as it is in heaven.
Give us this day our daily bread.
And forgive us our debts, as we forgive our
 debtors.
And lead us not into temptation, but de-
 liver us from evil: For
Thine is the kingdom, and the power, and
 the glory, forever. Amen.

Session 3

I. From traditional school grammar to Friesian grammar

A. "Survey of errors"

1. Statistical evaluation
2. Theory of transfer
3. Teaching

B. "Usage movement"

1. J. Leslie Hall. English Usage. 1917.
2. Sterling A. Leonard. Current English Usage. 1932.
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C. Changes in teaching grammar.

II. Actual usage of Americans.

Charles Carpenter Fries. American English Grammar. 1940.

It is the assumed obligation of the schools to attempt to develop in each child the knowledge of and the ability to use the 'standard' English of the United States - that set of language habits in which the most important affairs of our country are carried on, the dialect of the socially acceptable in most of our communities.

The first step in fulfilling that obligation is the making of an accurate and realistic survey and description of the actual language practices in the various social or class dialects. Only after we have such information in hand can we know what social connotations are likely to attach to particular usages. (p. 15)

For his corpus Fries used 2000 complete letters and 1000 excerpted letters from the files of the Department of the Interior. These letters were all serious appeals of some kind, which eliminated all uses of humor. He used only handwritten letters which showed some evidence of being written by the sender. To eliminate the influence of foreign languages upon the language of corpus, he specified that each letter in the corpus must have been written by at least a third generation native American. Personal data were collected on the senders of all the letters in the sample. The letters were then divided into three social dialects.

Group I Graduate of a reputable college after at least three years of college life. Employed in a professional position. The formal, non-linguistic matters in the letter conformed to the accepted conventions of writing.

Group III Not more than eight years of schooling. Employed in manual, unskilled labor. The formal, non-linguistic conventions of letter writing indicated semi-illiteracy.

For example: continual caprious spelling.
no capital letters.
no punctuation of any sort.

Group II Those who fit in between Groups I and III.

Fries analysed his sample by tabulating whatever he found.

We were seeking to record . . . the methods used by the English language to express grammatical ideas and to discover the precise differences in these methods as employed by the various social dialects.

The data fell "into a classification made up of three general

types of devices to express grammatical ideas." (p. 36)

1. Forms of words (Chapters V and VI)
i.e. singular-plural forms of nouns
present-past forms of verbs
subject-verb agreement
pronoun-antecedent agreement
2. Function words (Chapters VII, VIII, and IX)
i.e. "of"
"should" and "would"
These words usually have little lexical meaning and often express grammatical ideas which were formerly expressed by forms of words.
3. Word order (Chapter X)
As forms of words have become less important as grammatical devices in English, word order has become a more important grammatical device.

The most striking conclusion which Fries made was as follows:

The differences between the language of the educated and that of those with little education did not lie primarily in the fact that the former used one set of forms and the latter an entirely different set. In fact, in most cases, the actual deviation of the language of the uneducated from Standard English grammar seemed much less than is usually assumed, and in practically all instances was in the direction of greater conservatism. Vulgar English uses many forms that were common in the older stages of the language and that Standard English has given up.

The most striking difference between the language of the two groups lay in the fact that Vulgar English seems essentially poverty stricken (my italics). It uses less of the resources of the language, and a few forms are used very frequently. (p. 288)

Fries' major recommendation for the teaching of English is clear-cut.

It would seem to be a sound inference from the results of our study that perhaps the major emphasis in a program of language study that is to be effective should be in providing a language experience that is directed toward acquaintance with and practice in the rich and varied resources of the language. (p. 288)

Throughout both the introduction and the conclusion of his study Fries emphasizes the importance of teaching the student to observe the uses of the language.

To be really effective a language program must prepare the pupil for independent growth, and the only possible means of accomplishing that end is to lead him to become an intelligent observer of language usage. (p. 291)

III. The structure of American sentences

Charles Carpenter Fries. The Structure of English: An Introduction to the Construction of English Sentences. 1952.

Definition of a Sentence

In Chapter II, Fries presents an excellent discussion of definitions of a sentence. In all, he examined over two hundred definitions. For a "starting point" of his own definition, he quotes Bloomfield.

Each sentence is an independent linguistic form, not included by virtue of any grammatical construction in any larger form.

The following quotation will help to make clear the significance of Bloomfield's definition.

In any utterance, a linguistic form appears either as a constituent of some larger form, as

does John in the utterance John ran away, or else as an independent form, not included in any larger (complex) linguistic form, as, for instance, John in the exclamation John! When a linguistic form occurs as part of a larger form, it is said to be in included position; otherwise it is said to be in absolute position and to constitute a sentence. . . .

An utterance may consist of more than one sentence. This is the case when the utterance contains several linguistic forms which are not by any meaningful, conventional grammatical arrangement (that is, by any construction) united into a larger form, e.g., How are you? It's a fine day. Are you going to play tennis this afternoon? Whatever practical connection there may be between these three forms, there is no grammatical arrangement uniting them into one larger form: the utterance consists of three sentences.

It is evident that the sentences in any utterance are marked off by the mere fact that each sentence is an independent linguistic form, not included by virtue of any grammatical construction in any larger linguistic form. (pp. 20-21. Quoted from Leonard Bloomfield. Language. New York: Henry Holt and Company; 1933. p. 170.)

The basic problem of the practical investigation undertaken here is not solved simply by accepting Bloomfield's definition of a sentence. As one approaches the body of recorded speech which constitutes the material to be analyzed (or any body of recorded speech), just how should he proceed to discover the portions of an utterance that are not 'parts of any larger construction'? How can he find out the 'grammatical constructions' by virtue of which certain linguistic forms are included in larger linguistic forms? What procedure will enable him to decide which linguistic forms can 'stand alone as independent utterances'? (pp. 21-22)

The recorded conversations provided the suggestion for the first step. The easiest unit in conversation to be marked with certainty was the talk of one person until he ceased, and another began. This unit was given the name 'utterance.' (p. 23)

We could not take for granted that these utterance units contained only a single free utterance, nor that they were minimum free utterances. We could assume, however, that each utterance unit if not interrupted must be one of the following:

1. A single minimum free utterance.
2. A single free utterance, but expanded, not minimum.
3. A sequence of two or more free utterances.

We start then with the assumption that a sentence (the particular unit of language that is the object of this investigation) is a single free utterance, minimum or expanded; i.e., that it is 'free' in the sense that it is not included in any larger structure by means of any grammatical device. (p. 25)

From this point, by a long process of comparing each utterance unit with many of the others seeking recurrent partials, it was possible to separate those that consisted of single free utterances from those that consisted of sequences of free utterances. (p. 39)

With the same process of comparison--seeking recurrent partials--applied to the whole body of single free utterances that had been established, it was possible to arrive at minimum free utterance forms and to find the forms or arrangements by which the minimum free utterances are expanded. (p. 40)

Sentence Patterns

Basic formulas for the sentence patterns of present-day English can then be set up as the following:

Class 1 $\longleftrightarrow$ Class 2 = statement
 Class 2 $\longleftrightarrow$ Class 1 = question
 Class 2 (Class 1) = request (p. 148)

Form Classes

We concluded . . . that the signals of

structural meaning in English consisted primarily of patterns of arrangement of classes of words which we have called form-classes, or parts of speech.

The primary steps in determining and analyzing the form classes were as follows:

1. Lists of items for each form class were compiled by the process of substitution in the test frames.

The process of substitution in one position . . . provided a large list of items that for English structure are the same kind of functioning unit. . . . (p. 77)

2. The functions of each form class were determined.

The words of our list[s] also fitted into other positions in other minimum and expanded free utterances. The various 'positions' in which a part of speech can stand in our sentences constitute its functions or uses. (p. 78)

3. The formal characteristics of each form class were determined.

We want to know what the special characteristics of the words are that make them recognizably different from the words used in other positions. To discover these characteristics we need to explore these other positions and form comparable lists of words that can fill these positions. Significant formal characteristics of each class will appear then in the contrasts of one class with another. (p. 79)

Test Frames (p. 75)

Frame A (The) concert was/is good (always)

Frame B The clerk remembered the tax (suddenly)

Frame C The team went there

Words of Class 1

	Class 1		
(The)	_____	is/was	good
	_____	are/were	
The	<u>clerk</u>	remembered the	<u>tax</u>
	<u>husband</u>		<u>food</u>
The	<u>team</u>	went there	
	<u>husband</u>		

Words of Class 2 To be consistent we use the same test frames we have already tried for Class 1 words, but seek substitutions in another 'position.' (pp. 80-82) (Note: test frames provide subgroups of Class 2. Also notice that Fries' use of blank spaces appears inconsistent. In the examples below, the blanks underneath Class 1 imply that any word from the Class 1 list may occur in that position. The underlined words are members of the substitution list for form class 2.)

	Class 1	Class 2	
(The)	_____	<u>is/was</u>	good
		<u>are/were</u>	
		<u>feels/felt</u>	

	Class 1	Class 2	Class 1
(The)	_____	<u>remembered</u> (the)	_____
	_____s	<u>wanted</u>	_____s
		<u>saw</u>	

	Class 1	Class 2	
(The)	_____	went	there
	_____s	came	
		ran	

Words of Class 3 (pp. 82-83) (Note: the double frame is necessary to prevent this class from overlapping with Class 4.)

	Class 3	Class 1	Class 2	Class 3
(The)	<u>good</u> <u>best</u> <u>large</u> <u>lonely</u> <u>beautiful</u>	_____s	is/was are/were	<u>good</u> <u>best</u> <u>large</u> <u>lonely</u> <u>beautiful</u>

Words of Class 4 (pp. 83-85)

	Class 3	Class 1	Class 2	Class 3	Class 4
(The)	_____	_____s	is/was are/were	_____	<u>there</u> <u>here</u> <u>always</u>

	Class 1	Class 2	Class 1	Class 4
(The)	_____	remembered (the)	_____	<u>clearly</u> <u>easily</u>

	Class 1	Class 2	Class 4
(The)	_____	went	<u>there</u> <u>out</u> <u>away</u>

. . . our utterances consist primarily of arrangements of these four parts of speech. These utterances contain also, however, a body of other words, comparatively few in actual number of items, but used very frequently. (p. 86)

Function Words

Group A sometimes called determiners (pp. 88-89)

Group A	Class 1	Class 2	Class 3	Class 4
<u>The</u>	_____	is/was	_____	_____
<u>A</u>		are/were		
<u>Our</u>				

Group B (pp. 90-91)

Group A	Class 1	Group B	Class 2	Class 3
The	concert	<u>may</u> <u>might</u> <u>would</u> <u>should</u>	be	good

Group A	Class 1	Group B	Class 2
The	_____	<u>had</u> <u>was</u>	moved

Group A	Class 1	Group B	Class 2
The	_____	<u>was</u> <u>kept</u>	moving

Group A	Class 1	Group B	Class 2
The	_____	<u>did</u>	move

That there are several distinct subgroups of these words seems to be proved by their distinctive positions when used together.

Group	Class	Group	Class
A	1	B	2

The students may have had to be moving

Group C (p. 92) For Group C we have but one word here, not.
This not differs from the not included in Group E.

Group	Class	Class	Group	Class
A	1	2	C	3

The concert was not good

Group D (pp. 92-94)

Group	Class	Group	Group	Class	Group	Class
A	1	B	C	2	D	3

The concert may (not) be very good
any better
much

Group E (pp. 94-95)

Group	Class	Group	Group	Class	Class	Group	Class
A	1	E	A	1	2	E	2

The concerts and the lectures are and were

Class	Group	Class	Class	Group	Class
3	E	3	4	E	4

interesting and profitable now and earlier

All the words of this group stand only between words of the same part-of-speech class or subgroup, but the two words between which they stand may be of any one of the four classes.

both the concerts and the lectures (Class 1)
either are or were (Class 2)

neither interesting nor profitable (Class 3)
not now but earlier (Class 4)

Group F (pp. 95-96)

Group	Class	Group	Group	Class	Class	Group
A	1	F	A	1	2	F
The	concerts	<u>at</u>	the	school	are	<u>at</u>

Group	Class
A	1

the top

The words of Group F are followed by Class 1 words but may be preceded by words of Class 1, Class 2, or Class 3.

Group G (pp. 96-97) For Group G we have but one word, but this word appears in various forms: do, does, did.

Group	Group	Class	Class	Group	Class	Class
G	A	1	2	A	1	4
<u>Do</u>	the	boys	correct	their	work	promptly
<u>Did</u>						

Group H (pp. 97-98) For Group H we have one word, there. It seems to appear in a very limited number of sentence frames, and in two positions that are functions of Class 1 words. This word is not a Class 1 substitute, for the Class 1 word with its usual correlations always appears in the sentence also. This word has the same shape as the Class 4 word there except that it is always unstressed.

Group I (pp. 98-99)

Group	Group	Group	Class	Class
I	G	A	1	2
<u>When</u>	did	the	student	call
<u>Why</u>				

Group J (pp. 99-101)

Group	Class	Class	Class	Group	Group	Class
A	1	2	3	J	A	3
The	band	was	good	<u>after</u>	the	new
				<u>so</u>		
				<u>before</u>		

Class	Class
1	2
leader	came

Group K (pp. 101-102) For Group K there are four words that occurred very frequently at the beginnings of "response" utterance units. These "response" utterance units were very frequently but not exclusively answers to questions. These words also occurred at the beginnings of other sentences that continued rather than introduced conversations. The are the words well, oh, now, why. . . .

Group L (pp. 102-103) In this same position of introducing response utterances occur also the two words yes and no.

Group M (p. 103) . . . the three words that appeared at the beginnings of "situation" utterance units as attention-getting signals: look, say, listen.

Group N (p. 103) In Group N there appears only the one word please which occurs with request sentences, most frequently at the beginning.

Group O (pp. 103-104) Like please in that it occurs in a position with request sentences, but differing from please in its structural signal is the form lets. This form lets operates as a device which makes a request sentence into a request or proposal that includes the speaker. It differs from the phrase let us in its use, and the historical fact that "it is a contraction of

let us" is not significant. Compare, for example, the difference in response to the following sentences:

Let us look up the account and call you back.
 Lets do the invitations right away.

Form Classes

Fries does not define his form classes. He lists characteristics for them, partly in word forms, partly in syntactic uses. The characterizations, as a whole, become involved, overlapping, and incomplete. However, definitions, especially for unlimited classes such as the four form classes, may be impossible, whereas Fries' characterizations might definitely be useful. As Gleason (3:120) points out, a child, confronted with a new word, decides what kind of a word it is by comparing it, and the way it is handled, to other words which he already knows.

Formal Characteristics of the Form Classes

(See also: Nelson Francis, The Structure of American English. New York: W. W. Norton and Company; 1965. p. 614. Henry Lee Smith, Jr., English Morphophonics: Some Implications for the Teaching of Literacy. Monograph Number 10. Oneonta, New York: The New York State English Council; 1967. p. 119.)

Class 1 determiners - function group A
 inflection for plural and possessive
 derivational suffixes
 use with function words of Group F
 characteristic position

Class 2 inflection
 derivational affixes

use with function words of Group B
characteristic position

Class 3 derivational suffixes
 formation of comparative and superlative
 use with function words of Group D
 characteristic position

Class 4 derivational suffixes
 characteristic position

Practical Application

It is one thing to discover and describe what the structural signals of English are; it is quite another to start from such a descriptive display of the resources of the language and provide the exercises, the actual activities, by which a native speaker of English can develop a greater and greater control and use of these resources to the full. We are assuming here that the discovery and description of the resources themselves must precede and furnish the basis for an effective approach to the problems of such a practical mastery as characterizes those who have the greatest competence in communication. (pp. 292-293)

. . . the chief value of a systematic analysis and description of the signals of structural meaning in English is the insight it can give concerning the way our language works, and, through English, into the nature and functioning of human languages. (p. 296)

Session 4

Aspectual Grammar

Major figure: Henry Lee Smith, Jr.

Assumptions

1. Speech is primary.
2. Language is arbitrary.
3. Language is a system.
4. Each language system is unique.
5. The system constitutes the grammar of the language.

Definitions

Phonology: phonetics and phonemics.

Phonetics: science of speech sounds.

Phonemics: study of the distinctive classes of sounds of a particular language.

Phoneme: a single speech sound or a group of phonetically similar sounds which function as a distinctive unit in a given language.

Allophone: a sound of subphonemic status.

The Consonant Phonemes
of English

<u>Point of articulation</u>	<u>Manner of Articulation</u>	
	Voiceless	Voiced
lips together		
teeth on lower lip		
stops:	<u>p</u> ail /p/	<u>b</u> ale /b/
fricatives:	<u>f</u> ail /f/	<u>v</u> ale /v/
tongue tip on upper teeth		
stops:	none in English	
fricatives:	<u>th</u> igh /θ/	<u>th</u> y ð
tongue tip on ridge behind upper teeth		
stops:	<u>t</u> ip /t/	<u>d</u> ip /d/
fricatives:	<u>s</u> ip /s/	<u>z</u> ip /z/
fore part of tongue on roof of mouth		
stops:	none in English	
fricatives:	<u>sh</u> all /ʃ/	<u>az</u> ure /ʒ/
rear of tongue backed against roof of mouth at rear		
stops:	<u>k</u> ill /k/	<u>g</u> ill /g/
fricatives:	none in English	
affricatives: fricative and stop combination	<u>ch</u> ump /tʃ/	<u>j</u> ump /dʒ/
nasal: air diverted through the nose		<u>ram</u> /m/ <u>ran</u> /n/ <u>rang</u> /ŋ/
lateral: air diverted around sides of tongue		<u>lee</u> /l/
special resonant		<u>rib</u> /r/

Note: phonemes are always enclosed in slanted lines - / /.

Classification of Consonant Phonemes of English

Manner of Articulation		Point of Articulation					
		Bi-labio	Labio-Dental	Inter-Dental	Alveolar	Alveo-Palatal	Velar
stops:	vcls vcd	/p/ /b/			/t/ /d/		/k/ /g/
spirants:	vcls vcd		/f/ /v/	/θ/ /ð/	/s/ /z/	/ʃ ^v / /ʒ ^v /	
affricates:	vcls vcd					/tʃ ^v / /dʒ ^v /	
nasals:	vcd	/m/			/n/		
laterals:	vcd				/l/		
special resonant:	vcd				/r/		

The above chart is based on the Trager-Smith analysis of the English language and is part of an aspectual analysis of English.

Vowel Phonemes of English

There are 9 simple vowel phonemes.

	front	center	back
high	i	ɪ	u
mid	e	ə	o
low	æ	a	ɔ

key words		
pit	just (adv)	put
pet	putt	gonna
pat	clock	caught

/æ/-"digraph" /ɪ/-"barred I" /ɔ/-"open o" /ə/-"schwa"

There are 3 "glides": y, w, h (and sometimes r)

these are consonants
semi-vowels

before a vowel
after a vowel

There are 27 complex nuclei: the most common ones are underlined.

<u>iy</u>	ɪy	uy	iw	ɪw	<u>uw</u>	ih	ɪh	uh
<u>ey</u>	əy	<u>oy</u>	ew	əw	<u>ow</u>	eh	ɪh	<u>oh</u>
<u>æy</u>	<u>ay</u>	ɔy	<u>æw</u>	<u>aw</u>	ɔw	<u>æh</u>	<u>ah</u>	ɔh

Fill the blanks with key words based on your own pronunciation. Fill the / / with any other complex nuclei which you choose.

/i/ _____	/iy/ _____
/e/ _____	/ey/ _____
/ɔ/ _____	/oy/ _____
/ɪ/ _____	/ay/ _____
/ə/ _____	/uw/ _____
/a/ _____	/ow/ _____
/u/ _____	/aw/ _____
/o/ _____	/oh/ _____
/ / _____	/ah/ _____
/ / _____	/ / _____

Fill the blanks with key words. Whenever possible use the phoneme in initial and final positions.

/b/ _____	/t/ _____
/d/ _____	/v/ _____
/f/ _____	/w/ _____
/g/ _____	/y/ _____
/h/ _____	/z/ _____
/k/ _____	/θ/ _____
/l/ _____	/ð/ _____
/m/ _____	/ʃ/ _____
/n/ _____	/z/ _____
/p/ _____	/ç/ _____
/r/ _____	/j/ _____
/s/ _____	/ŋ/ _____

Transcription:

Write the following words phonemically. The first one is done for you.

those /ðowz/ _____	flight _____	leisure _____
length _____	sludge _____	fog _____
wrings _____	meshed _____	clothe _____
finger _____	shame _____	whole _____
singer _____	machine _____	mare _____

Session 5

The following exercises in reading transcription are from H. A. Gleason's Workbook in Descriptive Linguistics. New York: Holt, Rinehart and Winston; 1961.

sed ə greyt kangriːgeys̃inil priyčər
 tuw ə hen "yuHr ə byɪwtɪfəl kriyčər"
 ən θə hen, pliyzd ət θæt
 leyd ən eHg in ɪz hæt,
 ən θəs dɪd θə hen riywɔHrd biyčər.

æz ə byɪwtiy ay æm nat ə staHr,
 θər ər əθərz mɔHr hænsəm bay faHr,
 bət may feys, ay dont maynd ɪt,
 fər ay əm bihaynd ɪt;
 its θə piypɪl in frənt get θə ʃaHr.

Suprasegmental PhonemesStress Phonemes

/ˈ/ primary
 /ˌ/ secondary
 /˙/ tertiary
 /˘/ weak

lighthouse-keeper light housekeeper
 light housekeeper or light|housekeeper

Grammatical significance: structural signals

1. Identify certain constructions.

Compound nouns or Noun phrases

Lòng Ísland Ìs à lònġ ísland.

Two word verbs or Compound nouns

sèt ùp

sèt ùp

Verbs: pèrmit or Nouns: pèrmit

2. Delimit certain units.

Words in isolation have primary stress.

Phrases have only one primary stress.

bláck, bírd, tráp

bláckbírd, tráp, bláck, bírdtráp

bláckbírd tráp or bláckbírd tráp

bláck bírdtráp or bláck bírdtráp

mòre béautifùl(plus)gírls = mòre béautifùl gírls

móre(plus)béautifùl gírls = móre béautifùl gírls

The last two examples illustrate how stress can indicate two different constructions which otherwise look identical.

Pitch Phonemes

/1/ lowest

/2/

/3/

/4/ highest

2^ ~ ~ ~ 3^ ~ 1
 Sally's going to Paris

2^ ~ ~ ~ 2^ ~ 3
 Sally's going to Paris

2 ^ ~ ~ 3^ ~ 1
 What are you doing

Juncture

/+/ internal or plus

Henry+Ward+Beecher or hen+reward+Beecher

phonological phrase markers

/|/ single bar: pitch sustained

/||/ double bar: pitch is apt to rise slightly
 more lengthening than /|/

/##/ double cross: noticeably lengthened
 may be accompanied by pause and
 drop in pitch

The following is an interesting way to illustrate juncture
 and pitch.

2' 2 2 2 2 2 2 2 2 2 2 1
 one#two#three#four#five#six#

2' 1 2 1 2 1 2 1 2 1
 one#two#three#four#five#

2' 2 2 2 2 2 2 2 2 1
 one||two||three||four||five#

2' 3 2 3 2 3 2 3 2 2
 one||two||three||four||five#

2' 2 2 2 2 2 2 2 2 1
 one|two|three|four|five#

2' ~ ~ ~ 3^ 1
 one+two+three+four+five#

The following is an example of a long sentence written phonemically. It was part of a final examination written by Henry J. Sustakowski for an advanced grammar class.

2~ 3^ ~2 2~ ^ ~2 2 ^ ^ 2 2 2~1
 ʒə+veriy+ə nuwʒuwəl | | distɪktivliy+fiyčɪrd | | owl+mæn#

2~ ^ ~ 2~ 2 2 ^ ~2 ~ 2 ^ ~1 2^ ^ 2~ ^ ~2 ~2 2
 wəz+veriy+suwn | ə tækɪŋ+ə ə+prabləm | | ɔxt+hæd+kənfrəntɪd+əs | ʃhl+

1~1
 dey#

Session 7

Transformational Generative Grammar (1)

Major Figure: Noam Chomsky

Assumptions

1. All languages have a universal, underlying grammatical structure. This underlying structure is called deep structure.
2. This deep structure reflects fundamental properties of the mind--the forms of thought.
3. This structure is innate; therefore, language is an innate property, waiting to be triggered.
4. Although the deep structure of all languages is fundamentally the same, the means of its expression, or the surface structures, may vary widely.

Definitions

The following statement taken from Cartesian Linguistics (3:38-39) may serve as Chomsky's definition of transformational generative grammar. It also indicates the linguistic tradition with which he identifies.

Transformational generative grammar "is concerned precisely with the rules that specify deep structures and relate them to surface structures and with the rules of semantic and phonological interpretation that apply to deep and surface structures respectively. . . . In many respects, it seems to me quite accurate . . . to regard the theory of transformational generative grammar, as it is developing in current work, as essentially a modern and more explicit version of the Port-Royal theory." (See Session 1)

"A grammar [syntactic] is a finite set of rules which enumerates (or generates) an infinite number of grammatical (or well-formed) sentences of a language and no ungrammatical ones and assigns to each sentence generated its proper structural description" (K:4).

A Sample Generative Grammar

The following sample grammar is taken from H. A. Gleason, Jr. Linguistics and English Grammar. New York: Holt, Rinehart, and Winston; 1965. pp. 224-226.

P-RULES

These rules are numbered for convenience; the missing numbers will be inserted in the sample grammar to be used in the next session.

$$P_1 \quad S \longrightarrow \begin{bmatrix} \bar{NP} + VP \\ \text{Interj} \end{bmatrix}$$

$$P_2 \quad VP \longrightarrow \begin{bmatrix} -ed + V_3 \\ -s + V_3 \\ \text{Mod} + V_3 \end{bmatrix}$$

$$P_4 \quad V_3 \longrightarrow \begin{bmatrix} \text{have} + -en + V_2 \\ V_2 \end{bmatrix}$$

$$P_5 \quad V_2 \longrightarrow \begin{bmatrix} \text{be} + -ing + V_1 \\ V_1 \end{bmatrix}$$

$$P_6 \quad V_1 \longrightarrow \begin{bmatrix} \bar{V}-i \\ V-t + NP \\ V-b + NP \\ \text{be} + NP + -'s \\ \text{have} + NP \\ \text{be} + -en + V-t \end{bmatrix}$$

$$P_9 \quad NP \longrightarrow \begin{bmatrix} \bar{Det} + N_2 \\ N - \text{prop} \\ Pr \end{bmatrix}$$

$$P_{13} \quad N_2 \longrightarrow \begin{bmatrix} \bar{AP} + N_2 \\ N_1 \end{bmatrix}$$

$$P_{14} \quad N_1 \longrightarrow \begin{bmatrix} \bar{N}_2 + N_1 \\ N-c \end{bmatrix}$$

$$P_{16} \quad \text{Det} \longrightarrow \begin{bmatrix} \bar{D} \\ NP + -'s \end{bmatrix}$$

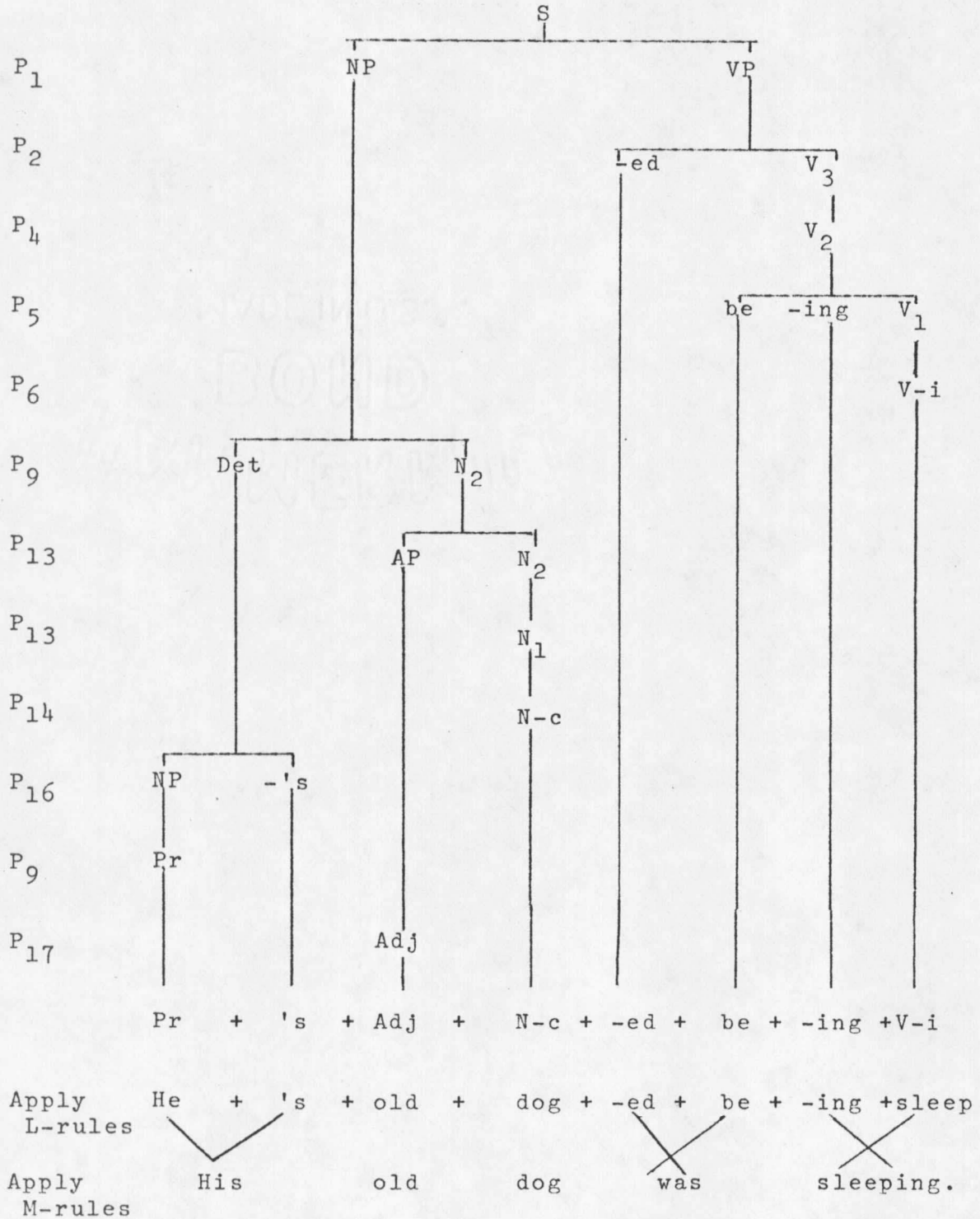
$$P_{17} \quad AP \longrightarrow \begin{bmatrix} \bar{Int} + Adj \\ Adj \end{bmatrix}$$

L-RULES

V-i	→ walk, swim, run, breathe, sleep
V-t	→ catch, strike, visit, buy, congratulate
V-b	→ be, become, remain, seem
V-l	→ be, seem, look, appear, feel
N-c	→ man, boy, wife, husband, brother, sister, dealer, car, bread, sports, city, lady, dog, temper, boxer
N-prop	→ James, Peter, Mary, Pauline, Fido, Spot
Pr	→ he, she, it, someone
D	→ the, a, this, that, each, every
Int	→ very, extremely, quite, too, less
Adj	→ good, bad, new, old, lazy, ambitious, beautiful, young
Mod	→ will, would, can, could, might
Interj	→ yes, no, ouch, wow

M-RULES

-s + have	→ has	-ed + have	→ had
-s + be	→ is	-ed + be	→ was
-s + walk	→ walks	-ed + walk	→ walked
-s + swim	→ swims etc.	-ed + swim	→ swam etc.
-en + have	→ had	-ing + have	→ having
-en + be	→ been	-ing + be	→ being
-en + walk	→ walked	-ing + walk	→ walking
-en + swim	→ swum etc.	-ing + swim	→ swimming etc.
he	+ -'s	→ his	
she	+ -'s	→ her	
someone	+ -'s	→ someone's	
man	+ -'s	→ man's etc.	

A Sample Derivational Tree

Session 8

The following sample grammar is taken from H. A. Gleason, Jr. Linguistics and English Grammar. New York: Holt, Rinehart, and Winston; 1965. pp. 251-253.

P-RULES

P ₁	S	→	$\begin{bmatrix} \bar{N}P + \bar{V}P \\ \text{Interj} \end{bmatrix}$	
P ₂	VP	→	PreV + V ₃	
P ₃	PreV	→	$\begin{bmatrix} \$No + -s + \$Aux \\ \$No + -ed + \$Aux \\ \text{Mod} \end{bmatrix}$	(+ not)
P ₄	V ₃	→	(have + -en +) V ₂	
P ₅	V ₂	→	(be + -ing +) V ₁	
P ₆	V ₁	→	$\begin{bmatrix} \bar{V}-i \\ V-t + NP + -m \\ V-b + NP \$ \\ V-l + AP \\ be + Loc \\ be + Poss \\ have + NP + -m \end{bmatrix}$	
P ₇	NP	→	N ₆ + No	
	NP \$	→	N ₆ + \$No	
P ₈	No	→	$\begin{bmatrix} sg \\ pl \end{bmatrix}$	
P ₉	N ₆	→	$\begin{bmatrix} \bar{N}_5 (+ \$PNM) \\ N\text{-prop} \\ Pr \end{bmatrix}$	
P ₁₀	N ₅	→	(Det +) N ₄	
P ₁₁	N ₄	→	(Num +) N ₃	
P ₁₂	N ₃	→	(Spec +) N ₂	
P ₁₃	N ₂	→	$\begin{bmatrix} \$AP + N_2 \\ N_1 \end{bmatrix}$	

P ₁₄	N ₁	→	$\begin{bmatrix} \bar{N}_2 + N_1 \\ N_{-c} \end{bmatrix}$
P ₁₅	Loc	→	$\begin{bmatrix} Adv-1 \\ Prep + NP + -m \end{bmatrix}$
P ₁₆	Det	→	$\begin{bmatrix} D \\ \$Poss \end{bmatrix}$
P ₁₇	AP	→	(Int +) Adj
P ₁₈	Poss	→	NP + -'s

T-RULES

T₁ OPT NP + X + V-t + NP + -m ⇒ NP + X + be + -en + V-t
 1 2 3 4 5 4 2 f f 3

+ by + NP + -m
 f 1 5

T₂ OBL No + (X +) \$No ⇒ No + (X +) No
 1 2 3 1 2 1 in 3

T₃ OPT by + NP + -m ⇒ nil Condition: by from T₁

T₄ OBL \$Aux + (Not +) have ⇒ have (+not)
 1 2 3 3 in 1 2

\$Aux + (not +) be ⇒ be (+ not)
 1 2 3 3 in 1 2

T₅ OPT NP + PreV + V₃ ⇒ PreV + NP + V₃
 1 2 3³ 2 1 3³

T₆ OPT NP ⇒ who

- T_7 OBL $X + \text{who} (+ -m) (+ Y) \Rightarrow \text{who} (+ -m) + X (+ Y)$
 $\quad \quad \quad 1 \quad \quad 2 \quad \quad 3 \quad \quad 4 \quad \quad 2 \quad \quad 3 \quad \quad 1 \quad \quad 4$
- T_8 OBL $\$Aux + V_1 \Rightarrow \text{nil} + V_1$
- T_9 OBL $\$Aux \Rightarrow \text{do}$
- T_{10} GEN $\$AP + N_2 \& (D +) N_2 + Y + \text{be} + AP \Rightarrow AP + N_2$
 $\quad \quad \quad 1 \quad \quad 2^2 \quad \quad 2^2 \quad \quad 3 \quad \quad 3 \text{ in } 1 \quad \quad 2^2$
- T_{11} GEN $\$AP + N_2 \& (D +) N_2 + Y + V-i \Rightarrow -\text{ing} + V-i + N_2$
 $\quad \quad \quad 1 \quad \quad 2^2 \quad \quad 2^2 \quad \quad 3 \quad \quad (f \quad 3) \text{ in } 1 \quad \quad 2^2$
- T_{12} GEN $\$AP + N_2 \& (D +) N_2 + Y + V-t + (Z +) N-c + \text{No} + -m$
 $\quad \quad \quad 1 \quad \quad 2^2 \quad \quad 2^2 \quad \quad 3 \quad \quad 4$
 $\Rightarrow N-c + -\text{ing} + V-t + N_2$
 $\quad \quad (4 \quad f \quad 3) \text{ in } 1 \quad \quad 2^2$
- T_{13} OPT $N-c + -\text{ing} + V-t + N_2 \Rightarrow -\text{ing} + V-t + N_2 (1 \Rightarrow \text{nil})$
 $\quad \quad 1 \quad \quad 2 \quad \quad 3 \quad \quad 4^2 \quad \quad 2 \quad \quad 3 \quad \quad 4^2$
- T_{14} GEN $\$AP + N_2 \& (D +) N-c + Y + V-t + (Z +) N_2 + \text{No} + -m$
 $\quad \quad \quad 1 \quad \quad 2^2 \quad \quad 3 \quad \quad 4 \quad \quad 2^2$
 $\Rightarrow N-c + -\text{en} + V-t + N_2$
 $\quad \quad (3 \quad f \quad 4) \text{ in } 1 \quad \quad 2^2$
- T_{15} OPT $N-c + -\text{en} + V-t + N_2 \Rightarrow -\text{en} + V-t + N_2 (1 \Rightarrow \text{nil})$
 $\quad \quad 1 \quad \quad 2 \quad \quad 3 \quad \quad 4^2 \quad \quad 2 \quad \quad 3 \quad \quad 4^2$
- T_{16} GEN $\$Poss + N_4 \& (D +) N_4 + Y + \text{be} + Poss \Rightarrow Poss + N_4$
 $\quad \quad \quad 1 \quad \quad 2 \quad \quad 2 \quad \quad 3 \quad \quad 3 \text{ in } 1 \quad \quad 2$
- T_{17} GEN $N_5 + \$PNM + \text{No} \& N_5 + Y + \text{be} + \text{Loc} \Rightarrow N_5 + \text{No} + \text{Loc}$
 $\quad \quad 1 \quad \quad 2 \quad \quad 3 \quad \quad 1 \quad \quad 4 \quad \quad 1 \quad \quad 3 \quad \quad 4 \text{ in } 2$

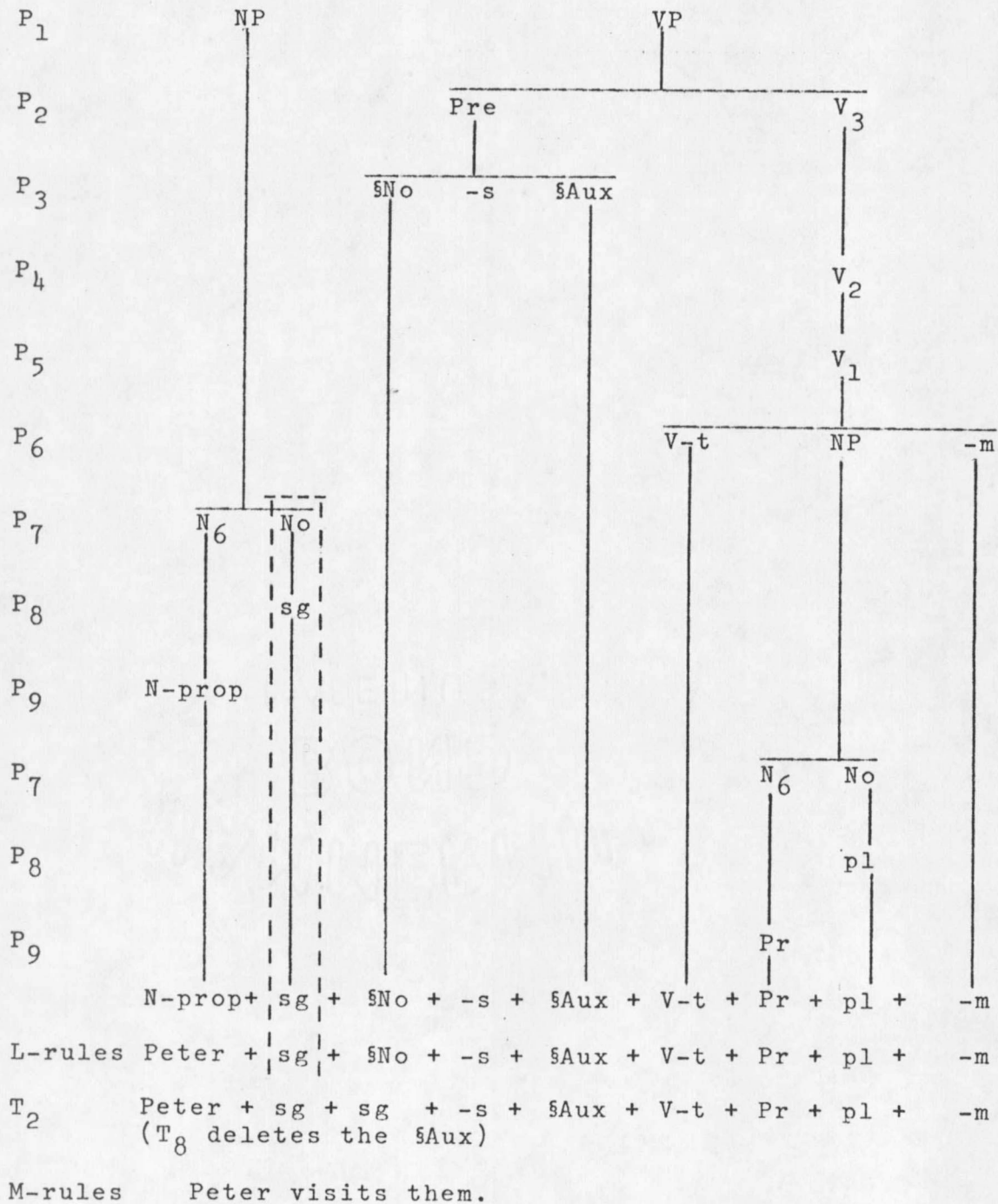
T₁₈ GEN N₁₅ + \$PNM + No & N₁₅ + Y + have + NP + -m
 1 2 3 1 4 5

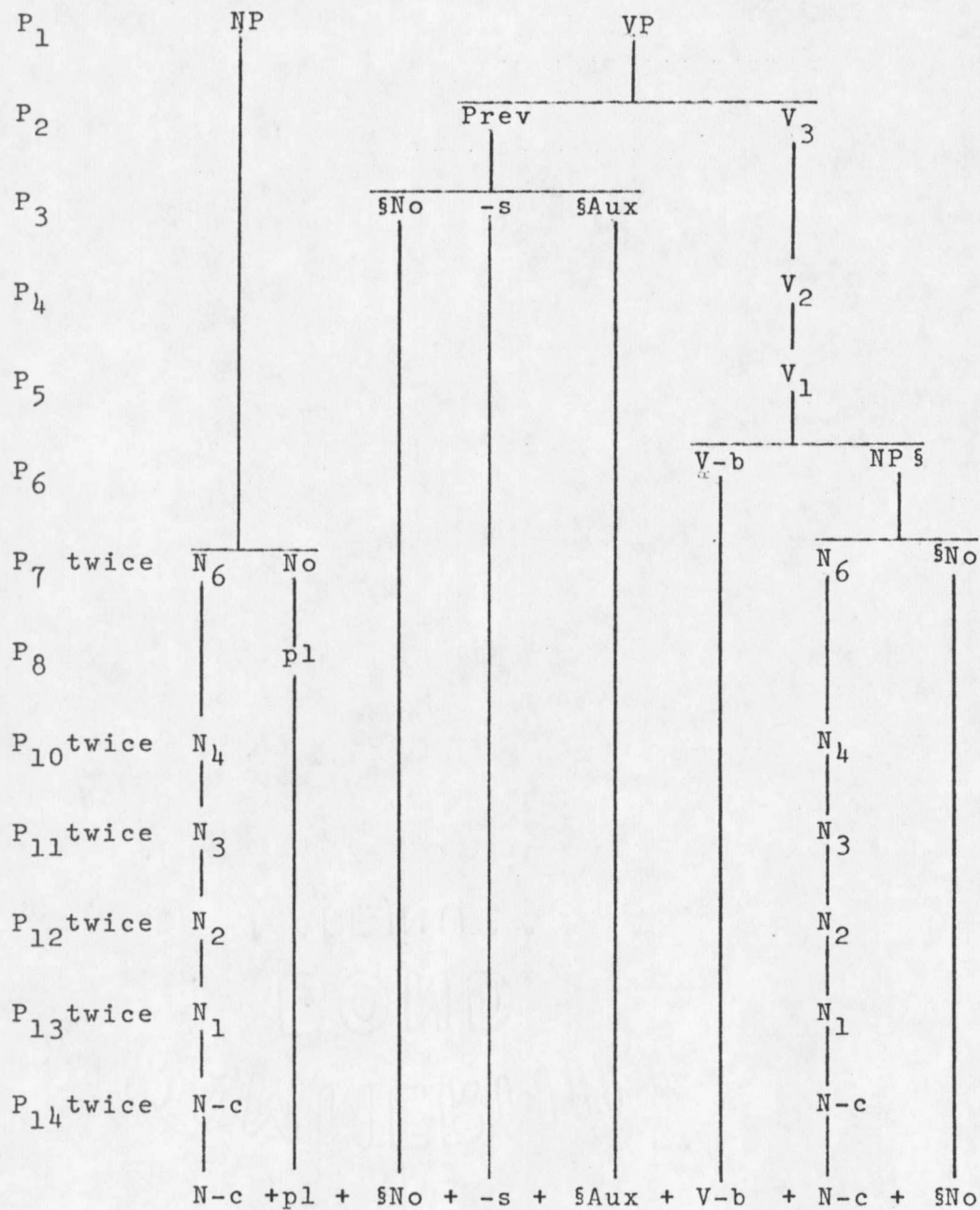
⇒ $N_1^5 + N_3^0 + \text{with} + N_4^P + -m$
(f 5) in 2

L-RULES

(Gleason. pp. 240-252.)

V-i	→	walk, swim, run, breathe, sleep
V-t	→	catch, strike, visit, buy, congratulate, own
V-b	→	be, become, remain, seem
V-l	→	be, seem, look, appear, feel
Mod	→	will, would, can, could, may, might, should
N-c	→	man, boy, wife, husband, brother, sister, dealer, car, city, lady, dog, temper, boxer
N-prop	→	James, Peter, Mary, Pauline, Fido, Spot
Pr	→	he, she, it, someone, they, we, your
Pr-m	→	him, her, it, someone, them, you, me
Det	→	the, a, this, that, each, every, some, these, those
Num	→	two, three, four, many, few, umpteen
Spec	→	same, different, other, certain, first, next, last
Adj	→	good, bad, new, old, lazy, ambitious, beautiful, young, mean
Int	→	very, extremely, quite, too, less, exceptionally
Adv-l	→	upstairs, there, here, yonder, outside, ashore
Prep	→	in, on, with, at, by, near, away from
Interj	→	yes, no, oh, well

Derivation Tree 1

Derivation Tree 2

L-rules Husband + pl + \$No + -s + \$Aux + be + man + \$No

T₂(as shown above)+ pl + pl (X) + pl

T₈ deletes Aux

Husband + pl + pl + -s + be + man + pl
 M-rules produce: Husbands are men.

Session 9

Generalizing Transformations

The following examples illustrate the operation of the GEN rules. These examples disregard the L-rules of the sample grammar.

matrix

$$T_{10} \quad \begin{array}{c} \text{SAP} \\ 1 \end{array} + \begin{array}{c} N \\ 2 \end{array} \& (D +) \begin{array}{c} N \\ 2 \end{array} + Y + be + \begin{array}{c} AP \\ 3 \end{array} \Rightarrow \begin{array}{c} AP \\ 3 \end{array} + \begin{array}{c} N \\ 2 \end{array} \text{ in } 1$$

identical

§AP+sugar & The sugar+sg+sg+-s+be+sweet $\Rightarrow$ sweet sugar

dress & The dress is blue $\Rightarrow$ blue dress

T₁₁

\$AP 1	+	N ₂ ²	&	(D +)	N ₂ ²	+	Y	+	V-i 3	=>	-ing + V-i f 3	+	N ₂ ²
											in 1		
\$AP	+	ball	&	The ball	bounces							=>	bouncing ball
\$AP+machine	&	The machine	squeaks							=>	squeaking machine		

T_{12} $\$AP + N_2 \& (D+) N_2 + Y + V-t + (Z+) N-c + No + -m \implies$
 1 2² 2² 3 4

woman the woman pinches pennies $\implies$

machine the machine washes clothes $\implies$

$N-c + -ing + V-t + N_2$
 4 f 3 in 1 2²

penny-pinching woman

clothes-washing machine

$T_{13}^{OPT} N-c + -ing + V-t + N_2 \implies -ing + V-t + N_2$
 1 2 3 4 2 3 4 (1 $\implies$ nil)

clothes+washing machine $\implies$ washing machine

This transformation is optional because it would not always be desirable to delete the noun, for instance in "penny-pinching woman." Notice, too, that "washing machine" is structurally different from "squeaking machine" produced by T_{11} .

T_{14} $\$AP + N_1 \text{ \& } (D+) N_3 -c + Y + V_4 -t + (Z+) N_2 + No + -m \Rightarrow$

stroke the students inspired the strike

leg the boy broke a leg

$N_3 -c + -en + V_4 -t + N_2$
 (3 f 4)inl 2

student-inspired strike

boy-broken leg

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T_{15} OPT (similar to T_{13})

$N_1 -c + -en + V_3 -t + N_4 \Rightarrow -en + V_3 -t + N_4$ (1 $\Rightarrow$ nil)

boy-broken leg $\Rightarrow$ broken leg

T_{16} fills the $\$Poss$ in the same manner as the above rules filled the $\$AP$.
 Its operation produces such sentences as

$\$Poss + car \text{ \& } the \text{ car is his } \Rightarrow his \text{ car}$

T₁₇ and T₁₈ provide for two of the post noun modifiers of English

T₁₇ boy + SPNM & The boys are here $\Rightarrow$ the boys here....

books + SPNM & The books are on the table $\Rightarrow$ the books on the table....

T₁₈ boy + SPNM & The boy had a ball $\Rightarrow$ The boy with the ball....

boy + SPNM & The boy had a cold $\Rightarrow$ The boy with the cold....

This grammatical solution is taken from Koutsoudas, Andreas. Writing Transformational Grammars. New York: McGraw Hill. 1966. p. 143.

In the example below the lexicon is part of the P-rules. However, notice that the determiner is specified in the T-rules. This is, in essence, defining the determiner as a grammatical or structural element rather than a lexical one.

Grammar

- | | |
|--|---|
| 1. NP $\longrightarrow$ Det + N | 8. Tob |
| 2. Det $\longrightarrow$ D | $D_1 \begin{bmatrix} \text{sg} \longrightarrow \text{this} \\ \text{pl} \longrightarrow \text{these} \end{bmatrix}$ |
| 3. D $\longrightarrow$ D_1, D_2 | 9. Tob |
| 4. N $\longrightarrow$ Ns + Nu | $D_2 \begin{bmatrix} \text{sg} \longrightarrow \text{that} \\ \text{pl} \longrightarrow \text{those} \end{bmatrix}$ |
| 5. Nu $\longrightarrow$ sg, pl | 10. Tob |
| 6. Ns $\longrightarrow$ boy, house, girl
table, dog | $\begin{bmatrix} \text{sg} \longrightarrow \phi \\ \text{pl} \longrightarrow \text{s} \end{bmatrix}$ |
| 7. Tob
D-Ns+Nu $\longrightarrow$ D+Nu-Ns+Nu | |

Notes:

Tob corresponds to T-OBL.

ϕ is an empty element.

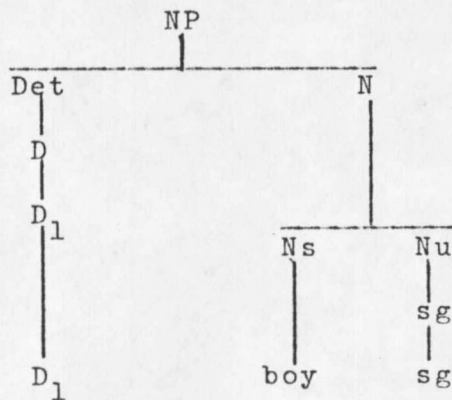
Dash - sets apart groups of elements

Plus + indicates elements which go together.

If the top element in the left bracket is present, the top element in the right bracket must be chosen.

Derivation

1. Det + N
2. D + N
3. D_1 + N
4. D_1 + Ns + Nu
5. D_1 + Ns + sg
6. D_1 + boy + sg
7. D_1 + sg - boy + sg
8. this boy + sg *
10. this boy

Derivation Tree

Transformational Grammar and the Classroom

- I. Pedagogical applications of generalizing transformations
 - A. Analyzing written passages
 - B. Manipulating ideas in composition
- II. Research in language acquisition and development
 - A. Roger Brown and Ursula Bellugi: "Three Processes in the Child's Acquisition of Syntax." Harvard Educational Review 34:133-151 (Spring 1964.)
 - B. Kellogg W. Hunt: Grammatical Structures Written at Three Grade Levels. NCTE Research Report No. 3. 1965.
 - 1. T-unit - the shortest grammatically allowable sentences into which the material could be segmented - was the best indicator of maturity.
 - a. Growth occurs in the number of subordinate clauses within T-units.
 - (1) Adverb
 - (2) Noun
 - (3) Adjective
 - b. Growth also occurs in non-clause modifiers.
 - 2. In "superior" adult writing clause length was the best indicator of maturity. The number of adjective clauses remained a valuable index of mature writing.

Session 10

The Role of Linguistics in the Classroom

Nelson Francis. "The Study of Language in English Teaching." Paper read at the Conference on Research in English, Carnegie Institute of Technology, May 6, 1962 (mimeographed, pp. 9).

1. To inform the student about the nature of language, its place in human history and culture, its relation to the formulation and communication of ideas and to the expression of artistic and philosophic insights and preceptions.
2. To supply the student with information about his own language - its structure, its vocabulary, its history, its variety, and its present important position in world affairs.
3. To encourage the student to have a wholesome respect for his language, manifesting itself in a more sensitive, careful, and accurate use, in both writing and speech.

H.A. Gleason. "What Grammar?" Harvard Educational Review 34:2 (Spring 1964).

. . . our students must not only be made to be critical about language, but equally critical about our understanding of language. At suitable places they must see that there is more than one way to describe a significant point of structure. They should have at least a basic understanding of the major approaches to syntax. They should know something of school grammar, in part because it is assumed in so many places, but equally because its basic assumptions are worth examining. Names like Lowth, Jespersen, Bloomfield, de Saussure should mean as much to them as do Faraday, Mendeleev, or Pasteur, and they should know Priestly from both Chemistry and English--and understand the significance of his wide-ranging activities. The history of linguistics, like the history of other systems of notable ideas, should be within the purview of an educated man.

e.e. Cummings. "anyone lived in a pretty how town."
Poems 1923-1954. New York: Harcourt, Brace and World;
 1954.

anyone lived in a pretty how town
 (with up so floating many bells down)
 spring summer autumn winter
 he sang his didn't he danced his did.

Women and men (both little and small)
 cared for anyone not at all
 they sowed their isn't they reaped their same
 sun moon stars rain

children guessed (but only a few
 and down they forgot as up they grew
 autumn winter spring summer)
 that noone loved him more by more

when by now and tree by leaf
 she laughed his joy she cried his grief
 bird by snow and stir by still
 anyone's any was all to her

someones married their everyones
 laughed their cryings and did their dance
 (sleep wake hope and then) they
 said their nevers they slept their dream

stars rain sun moon
 (and only the snow can begin to explain
 how children are apt to forget to remember
 with up so floating many bells down)

one day anyone died i guess
 (and noone stooped to kiss his face)
 busy folk buried them side by side
 little by little and was by was

all by all and deep by deep
 and more by more they dream their sleep
 noone and anyone earth by april
 wish by spirit and if by yes

Women and men (both dong and ding)
 summer autumn winter spring
 reaped their sowing and went their came
 sun moon stars rain

V

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