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# Linguistics and Language Learning: A Translation Theory

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LINGUISTICS AND LANGUAGE LEARNING: A TRANSLATION THEORY

By

Sharon F. Kissane

A Dissertation Submitted to the Faculty of the Graduate School  
of Loyola University in Partial Fulfillment of  
the Requirements for the Degree of  
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## ABSTRACT

In preparation for this study, an extensive search of literature pertaining to the linguistic approach to language analysis and communication theory was made in order to extract the essential elements of the encoding-decoding systems inherent in language processing.

The author's thesis is that the acts of speaking, writing and reading in one's native language requires many of the same translation skills essential to translating from one language to another. In addition, translating messages within the English language itself, between different types of native speakers such as speakers having different dialect patterns or between various decoding media such as oral reading as opposed to silent reading demands a set of translation skills peculiar to communication within the English language.

Towards the development of such a translation theory, the author selected the familiar linguistic procedures of phonetic analysis and phonemic analysis, intonation patterning and transformational analysis from which she extracted and devised the techniques and approaches necessary for encoding and decoding language forms encountered within the language arts curriculum. Proceeding from the smallest elements in language analysis-the allophone and phonemen the thesis continues through larger units and finally, transformational analysis is used to decode an entire poem. The final chapter presents a case study wherein the author conducts two classes in curriculum for in-service teachers, guiding them in the theory and individualized application of translation theory.

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## VITA

Sharon Florence Mrotek Kissane was born in Chicago on July 2, 1940 to Agnes (Payne) Mrotek and William Mrotek. On July 2, 1966, she became the wife of James Quinn Kissane. Laura Janine Kissane was born on January, 1968.

The author attended Notre Dame High School. She received her B.A. degree from De Paul University in February of 1962. She majored in English and in Speech. She completed her master's degree in December of the same year. The degree was awarded by Northwestern University's School of Speech in the field of Public Address and Group Communication with a minor in education.

After graduating from Northwestern, the author became a writer and editor for Commerce Clearing House. In September of 1963, she became an instructor in speech at the University of Illinois. She taught at the University until 1966. During this time, she also taught at the Illinois Institute of Technology and Columbia College of Communicative Arts. On a part-time basis, she has had experience in elementary teaching, debate and drama coaching and adult education programs in a teaching capacity and consultative role. This past summer, she enjoyed teaching two curriculum courses with Sister Constantine at Loyola University.

The author is active in a number of professional organizations and has been honored by inclusion in Who's Who Among College Students, Who's Who in American Education and in the Dictionary of International Biography.

## CHAPTER ONE INTRODUCTION

In his provocative book, The Process of Education, Jerome Bruner wrote about a spiral curriculum arrangement wherein the curriculum of a subject should be determined by the most fundamental understanding that can be achieved of the underlying principles that give structure to that subject.<sup>1</sup> To teach specific topics or skills without making clear their context in the most fundamental structure of a field of knowledge is uneconomical in several deep senses. Knowledge that one has acquired without adequate core to tie it together is knowledge that is likely to be forgotten. The new mathematics and the new science curriculum planning reflect development according to basic structural principles. At the Dartmouth Seminar of 1966 sponsored by the National Association for the Teaching of English, Frank Whitehead discussed Bruner's proposal in light of the English curriculum. Whitehead questioned whether this concept of structure "could be applied in any but a loose metaphorical sense."<sup>2</sup> Linguists attending the Conference answered that a strict structural approach could be applied to the study of language. Some literary critics cited attempts to apply structural principles to investigation of forms of literature. Other critics felt that the structural approach could not provide a viable perspective for viewing the various phases of the English and language arts curriculum; that is, reading, writing, speaking and listening. What the Conference Participants all agreed to was that the English curriculum had become a sort of gathering

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<sup>1</sup>Jerome S. Bruner, The Process of Education (Cambridge: Harvard University Press, 1960), p. 31-32.

<sup>2</sup>Herbert J. Muller, The Uses of English: Guidelines for the Teaching of English from the Anglo-American Conference at Dartmouth College (New York: Holt, Rinehart and Winston, Inc., 1967), p. 9.

place for odd bits within the curriculum which other departments would not or could not handle. Also, the participants acknowledged a major dilemma in that the looseness of the curriculum was not only unwieldy but almost chaotic and yet, although the teachers wanted discipline, they also desired freedom or as one participant has summarized, "Actually, we like chaos."<sup>3</sup> This remark, notwithstanding, the Conference called for drastic changes in the ways in which English was being taught both in the United States and in England.

As intimated from the foregoing remarks, two approaches to the study of English have become ingrained in the curriculum. As generally understood, the teaching of English involves guiding students through various activities formally separated into such subject areas as reading, writing, listening and speaking as well as accounting for particular types of literature or literate discourse such as in a study of the novel.

Recent literature in the field strongly suggests that the linguistically-based approach to language as it is structured within the various communication systems of reading, writing, speaking and listening and manifested in the various discourse forms of the language is able to serve as the spindle of the language arts curriculum around which the forms and expressions encoil and expand. Thus, a continuous, recycling strand is provided for the encoding and decoding experiences present within the language curriculum having as its over-all objective, development of skill in communicating within the accepted forms of English language processing. Two reports particularly illustrative of this emerging concept of integration of language learning along a language-structure dimension are Growth through English by John Dixon and the Final

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<sup>3</sup>Muller, p. 10.

Report of Cooperative Research Project Number 5-0804 entitled, "Unified Academic and Professional Experiences in Language and Writing for the Preparation of Secondary School Teachers of English", supported by the Office of Education and conducted by Daniel Rider and Elizabeth Rusk.

The purpose of this dissertation is to propose a linguistically-based analysis of language learning as a translation process emphasizing encoding and decoding techniques necessary for efficient communication. This approach does not offer a step-by-step regimentation of the learning process. Rather, the translation model suggested provides freedom to explore the many types of language expression while providing for a consistent structural undergirding.

The construction of this translation system or approach to language learning is an outgrowth of my readings in the philosophy of language, linguistics, communication theory, curriculum development and my studies in language analysis under Dr. Barry of the English Department of Loyola University. Opportunity for the application of transformational analysis was afforded through my private tutoring of English as a second language. In a new course developed jointly with Sister Constantine, the principles of this translation system were introduced to elementary and secondary school teachers. A critique of the course is presented in the final chapter of this dissertation.

The American College Dictionary lists several standard definitions of the verb, "translate".<sup>4</sup> As might be expected, the first definition associates the act of translation with a change of form from one language to another; to wit, "to turn (something written or spoken) from one language into another." The

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<sup>4</sup>American College Dictionary, Vol. II. edited by Clarence L. Barnhart (Chicago: Spencer Press, Inc., 1952), p. 1287.

second definition interprets the phrase, "to translate" as the process of changing into another form- "to transform or convert". The third definition cites "translate" as "to bear, carry or remove" from one place, position, condition, etc., to another. This dissertation hopefully will expand upon such narrow concepts of the translation process in an effort to establish the importance of translation inherent in communication among native as well as non-native speakers of the English language. Translation techniques should not be limited to foreign-language teaching or to the teaching of English as a second language.

A search of the literature has failed to reveal any attempt to apply a theory of translation stressing the encoding-decoding linguistic techniques as an integrative element of the language arts although some prominent linguists and communication theorists have considered this aspect of communication. George A. Miller observes a problem within language learning as the mind turns in upon itself. He feels that the student of language must ask himself, "Can we advance our knowledge of the use of symbols by the use of symbols?"<sup>5</sup> Miller insists that the undertaking of a scientific study of communication requires a detached, formal attitude:

In the formal attitude the personal, meaningful aspects of of verbal behavior are often ignored, and the symbols are seen as simple patterns of muscular twitches or agitations of the air molecules or patterns of squiggles on the page.

The form is taken to be the unit of negotiation between the interdependencies of words and yet, positioning, syntactical patterning and certain other

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<sup>5</sup>George A. Miller, Language and Communication (New York: McGraw-Hill Book Co., 1951), p. 2.

<sup>6</sup>Miller, p. 2.

environmental features must be considered. I. A. Richards in his article, "The Interactions of Words", advises that how a word is understood depends on the other words you hear it with, and the other frames you have heard it in."<sup>7</sup>

While John Carroll stresses cultural continuity of word forms, R. Carnap emphasizes the transmission of messages as exchange of word forms which are only approximate equivalents of messages as they are encoded and decoded within the individual person's information processing mechanism. In his article, "Words, Meanings and Concepts," John Carroll states:

As a physical symbol, a word is a cultural artifact that takes the same, or nearly the same, form throughout a speech community. It is a standardized product on which the speech community exercises a considerable degree of quality control. The conditions under which the use of words is rewarded or not rewarded-either by successful or unsuccessful communication or by direct social approval or disapproval<sup>8</sup> can be looked upon as constituting the "rules of usage" of a word.....

Carroll is careful to add that this does not apply in a total sense to concepts which vary to some extent with the individual dependent upon experiences of the referents of the words. Carroll's statements, therefore, take cognizance of discipline or community conformity and freedom or individual interpretation which are both accorded within language processing to greater or lesser extents depending upon the media. Whereas technical writing is basically information-processing which is high in redundancy, the writing of poetry entails a high degree of ambiguity and represents "a molding and remolding of the ever-varying

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<sup>7</sup>I. A. Richards, "The Interactions of Words" in The Language of Poetry edited by Allen Tate (New York: Russel & Russel, 1960), p. 73.

<sup>8</sup>John Carroll, "Words, Meanings and Concepts" in Language and Learning edited by Janet Emig et. al. (New York: Harcourt, Brace & World, Inc. 1966), P. 82-83.

flux."<sup>9</sup>

A rather extreme view of the non-transference of content was held forth by Carnap who maintained that precise content was incommunicable. Carnap did posit that symbols could be interchanged with considerable efficiency but that much of the underlying content meaning was not wholly transmitted to the receiver by the message encoder. Perhaps, these words are indicative of his position:

Since other people cannot sense my sense-data, or share my thoughts or feelings, they cannot verify my statements that I make about them; neither can I verify the corresponding statements that they make about their experiences. And if I cannot verify them, I cannot understand them either. To this extent we inhabit entirely different worlds. What can be verified, however, is that these worlds have a similar structure. What matters is that the structure of our respective worlds is sufficiently alike for me to be able to rely on the information that he gives me, and it is in this sense only that we have a common language.....<sup>10</sup>

Carnap's writings seem to typify the analytical methods espoused by the logical positivists who regard language as information-processing. Objective measurement and public verifiability are objectives in the scientific description of language as a communication system. Linguists such as Noam Chomsky rely heavily on the methodology and symbolism peculiar to modern symbolic logic and information theory.

With regard to transformational analysis, Carnap seems to presage the development of kernel sentences and transforms pioneered by Chomsky in Carnap's

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<sup>9</sup>Richards, p. 71.

<sup>10</sup>Carnap, as quoted in the "Editor's Introduction" to Logical Positivism edited by A. J. Ayer (New York: The Free Press, 1959), p. 18.



discussion of this question, "What does a protocal sentence such as sentence  $P_1$  mean?" He states: "Such a question can only be answered by the presentation of a sentence or of several sentences which has or conjointly have the same content as  $P_1$ ." <sup>11</sup> The viewpoint here is that  $P_1$  has the equivalent content as a sentence  $P_2$  which asserts the existence of a physical structure characterized by the disposition to react in a specified manner to specific physical stimuli. Substitutability and reproducibility as equivalency criteria are retained in the transformation system of Chomsky and his followers.

In Bloomfield's landmark publication, Language, Bloomfield asserted that "The study of speech sounds without regard to meanings is an abstraction; in actual use, speech sounds are uttered as signals." <sup>12</sup> It was Bloomfield, the leader of the American structuralist school, who postulated that grammatical meaning must be determined by reference to the formal (structural) differences in a language since these formal contrasts were said to determine differences in linguistic meaning. Commenting upon one aspect of change in grammatical analysis ensuant upon hypothesis, John Waterman sets up a contrast between the traditional definition of the parts of speech as against the revised approach to categorization based upon classes of form and function. For instance, Waterman pounces upon the traditional definition of a noun as "the name of a person, place or thing." Waterman argues that these categories are virtually

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<sup>11</sup>Rudolf Carnap, "Psychology in Physical Language," in Logical Positivism edited by A. J. Ayer (New York: The Free Press, 1959), p. 172.

<sup>12</sup> Leonard Bloomfield, Language (New York: Holt, Rinehart and Winston, 1965), p. 139-140.

"useless as a definition, since the words contain no grammatical information."<sup>13</sup> Even if accurate criteria were to be had for the sorting out of persons, places and things categories within our environment to form an acceptable "noun" list, "we would still not have the slightest hint as to how these nouns fitted into the linguistic system we call 'language'."<sup>14</sup> Waterman shows that even though a closed lexical unit were created for the noun category, the syntactic elements, the positioning and arrangement of items into successive units of grammatical utterance would be unaccounted for. Language as an operational system demands such additional information in order to utilize individual lexical items. Waterman asserts that "This critical information can only be learned by noting the structural features that differentiate these forms (nouns) from other forms."<sup>15</sup> Eventually, through structural analysis, we discover the specific criteria which permit the grouping together of certain morphemes into form-classes. It is at this nexus that the linguist is able to formulate a physical definition of a noun in terms of structural and distributional patterns. The scientific validity of our definition is confirmed when a native speaker responds in a predictable way to the patterns we have established.

Bloomfield, a contemporary of John Dewey, strove for physical definitions that were scientifically verifiable and controllable. Many of the basic postulants which Bloomfield formulated are retained in the literature of structural linguistics. Perhaps, the most detailed application Bloomfield made of his theories was in terms of his structural approach to the teaching of

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<sup>13</sup> John Waterman, Perspectives in Linguistics (Chicago: University of Chicago Press, 1963), p. 95.

<sup>14</sup> Waterman, p. 95.

<sup>15</sup> Waterman, p. 95.

reading. In his book, Let's Read, which was co-authored by Clarence Barnhart, the teacher is cautioned that the beginning reader should concern himself only with symbol identification and differentiation. The beginning reader is to master the forms of the individual alphabet letters before he is asked to concentrate upon the meaning of the printed symbols as they appear in words. Further reference to this reading system will be made in the body of the dissertation.

Analytical techniques and methodology advocated by the structural linguists were rather a long time in coming to the foreground within the language arts curriculum. Foreign language teachers in the early forties were eagerly adapting the direct translation methods outlined in contrastive data material issuing forth from the then-rather obscure linguistic publications. Speech correctionists working exclusively with "problem" children also expanded their methodology to include the latest articulatory descriptions afforded by such leading descriptive linguists as Professor Pike who published his Phonetics in 1942 and his Phonemics in 1947. For years his publications were the most frequently used handbooks of their kind. References to his work appear frequently in current literature on linguistics. Although his work was immediately proclaimed in foreign language teaching circles as well as introduced within the teaching of English as a second language, a generation passed before Pike's work was incorporated within the English language arts program.

During this same period a number of other works on phonemic theory were published. Bloch and Trager outlined phonemic classification procedure. Zellig Harris introduced the concept of distributional analysis. Charles Hockett concerned himself with the problem of the classification of allophones

and the phonemics of English syllabic. Eugene Nida made a conspicuous contribution with the publication of his Morphology: The Descriptive Analysis of Words which was published originally in 1946 and revised in 1949. In 1948, Bernard Bloch's classical article, "A Set of Postulates for Phonemic Analysis," appeared in the twenty-third volume of "Language."

Once the analytical methods for a phonemic structuralization of language had been derived, scholars began shifting their attention to the higher levels of intonational analysis and syntax. The spearhead for transformational analysis and derivatives of elaborate sentence patterns from kernel sentences occurred with the publication of Noam Chomsky's Syntactic Structures in the mid-fifties. The many articles and publications flowing from this book inspired a movement towards transformational analysis within the English curriculum which is still on-going as witness Justus Pearson's article, "What Grammar (s) and Why?" appearing in Issues in the Preparation of Teachers of English published by the Illinois State-wide Curriculum Study Center in the Preparation of Secondary School English Teachers (ISCPET). Two years later, in 1969, the urgency for preparing teachers along these new lines was evident in the ISCPET Study entitled, Project Grammar: The Linguistic and Language Preparation of Secondary School English Teachers prepared by Justus Pearson and James Reese.

In order for the new structural curriculum to be effective, new attitudes and skills will be required of the language arts teacher. Exclusive attention to subject matter is no longer sufficient. Subject matter must be coupled with inventive, stimulating presentation. The teacher must encourage the student to inductively seek out patterns and arrangements or as Nellie

Thomas pleads in the title of her language arts manual: "Let the Student Do the Work." For instance, if the teacher wishes to develop healthy and constructive attitudes toward writing on the part of the students, he should:

create a context in which writing is accepted, indeed expected as normal procedure in the English classroom; he must...create a classroom situation which allows writing to flow naturally from the ideas and the literature being studied, and from the total environment of the students....He should also strive to give the student-writer an opportunity to receive some approval from the teacher and from his peers.<sup>16</sup>

The linguistics approach de-emphasizes the idea of the teacher as star performer. In her conclusion to the ISCPET Study entitled, "An Experimental Study of the Development of Critical Thinking Skills of High School English Teachers Enrolled in a Methods Course," Sister Mary Constantine, the investigator, stated:

The most urgent implication is that teachers need to be alerted and trained to teach for critical thinking. America needs teachers who are convinced that it is neither wise nor possible to give students all the answers they will need in life and who prepare their students for constant readaptation to new and different problems in this kaleidoscopic world.<sup>17</sup>

The NEA and AASA Educational Policies Commission of 1961 stated flatly: "No particular body of knowledge will of itself develop the ability to think clearly." The Commission felt that the development of thinking ability was dependent upon those methods which encouraged the "transfer of learning

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<sup>16</sup>Daniel Rider and Elizabeth Rusk, "Unified Academic and Professional Experiences in Language and Writing for the Preparation of Secondary School Teachers of English" (East Lansing: Michigan State University, 1967), p. 39.

<sup>17</sup>Sister Mary Constantine, S.S.J., "An Experimental Study of the Development of Critical Thinking Skills of High School English Teachers Enrolled in a Methods Course" (Washington, D.C.: ISCPET, 1968), p. 18.

from one context to another and the reorganization of things learned."<sup>18</sup>

If teachers allow the student to explore language inductively, they must be prepared for divergent as well as convergent thinking on the part of their students. Also, the products of the students will vary somewhat as will the pace of learning. Seibers and Snow relate that after an instructional message has been relayed to a sample of learners, follow-up tests will disclose:

On some items, relatively large numbers of learners will demonstrate certain specified or intended performances. On others, relatively few will show such performance. Why? A step toward some answers is to proceed backward into the message and to examine, then index as many potentially influential characteristics of the message as the investigator cares to consider.<sup>19</sup>

According to the authors, this indexing is accomplished by isolating a message segment which is instrumental in producing the effects measured by each criterion item. Bridging this idea to student learning procedures, the teacher would do well to provide the student with questions and criteria on a variety of linguistic levels with which to test and unlock the multi-faceted elements of the message.

In recent years, steady criticism has mounted against the Grecian mold of memory and imitation as the keystones of education. Thelma Thurstone in her article, "Implications for Teaching" laments that at the present time, "research suggests that a disproportionate amount of class time is given to

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<sup>18</sup> National Education Association and American Association of School Administrators, Educational Policies Commission, The Central Purpose of American Education (Washington, D.C.: the Commission, 1961), p. 18.

<sup>19</sup> Warren F. Seibers and Richard E. Snow, "OASIS: A Methodology for Instructional and Communications Research" (Indiana: Purdue University, 1965), p. 3.

activities involving memory operations. Little immediate time is given to evaluative thinking, let alone divergent thinking."<sup>20</sup>

Newer educational theory makes provision for a large number of varied operations which the intellect can perform. An important modern work is Bloom's Taxonomy of Educational Objectives. Its classification system is akin to biological taxonomies. According to the foreword, Bloom feels that modeling the statement of educational objectives along the lines of scientific categorization will insure "accuracy of communication"<sup>20</sup> and will be of help to educators in discussing curricular problems "with greater precision." Bloom reserves Section 2.10 within his Taxonomy for "Translation." He places this type of behavior as occupying a transitional position between the behaviors classified under the category of knowledge and types of behavior described under interpretation, extrapolation, synthesis, application and evaluation. Of particular pertinence to the translation theory being developed within this dissertation in the following description of translation:

An abstract idea may need to be transformed to concrete or everyday terms to be useful in further thinking about some problem presented by the communication. Sometimes an extended part of a communication may need to be translated into briefer, or even more abstract, terms or symbols, to facilitate thinking. This type of translation may carry over into more<sup>23</sup> complex behavior, such as analysis, synthesis or application.....

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<sup>20</sup> Mary Jane Aschner and Charles E. Bish, "Implication for Teaching" in Productive Thinking in Education Washington, D.C.: The National Education Association and the Carnegie Corporation, 1965), p. 41.

<sup>21</sup> Benjamin S. Bloom, Taxonomy of Educational Objectives (New York: David McKay Co., Inc., 1956), p. 1.

<sup>22</sup> Bloom, p. 1.

<sup>23</sup> Bloom, p. 91.

Illustrative educational objectives are presented. The three types of objectives are: translation from one level of abstraction to another; translation from symbolic form to another form, or vice versa and translation from one verbal form to another.

The behaviors and activities suggested within this dissertation can be incorporated within these objectives. Under the first type of objective could be listed the transformational training requiring the restatement of a complex sentence into basic units which serve as the surface and deep structure of the complex sentence. Another example would be to restate a poem in transformational symbolic terms. Translating spelling word lists into phonetic symbols or transcribing the ordinary sounds of speech by means of phonetic transcription would also be included under this type of activity. The next type, translation from symbolic form to another form, can be illustrated by oral readings from works which have been coded in terms of intonation curves. Another activity would be the restatement in prosody of metaphor and other poetic symbols. Finally, this type of objective could be illustrated by having the student indicate kinesthetically and visually the sound signalled by the printed alphabet letter such as "p". The third type of objective is represented in terms of inductively grouping spelling words according to certain letter combinations within them which were designated within a common historical context such as "knight" and "knock". Another example would be to describe a dialectal pattern by means of paired minimal contrast.

Further insight into the translation process is afforded by a study of J. P. Guilford's "Structure of Intellect Model." Guilford categorizes



thinking abilities in terms of both their products (units, classes, relations, systems, transformations and implications) and the kind of content to which they apply which he describes as semantic, symbolic or figural.

In his discussion of Guilford's "Structure of Intellect", Robert Wilson states that "Perhaps for the classroom teacher, the most important of these classifications...is the operations performed on the information."<sup>24</sup> The major kinds of intellectual processes classified under "operations" are cognition, memory, divergent production, convergent production and evaluation.

The cognitive abilities have to do with the discovery, recognition or comprehension of information. This study explores the structure of language through discovery techniques provided by phonetic and phonemic analysis as well as through transformational analysis. The memory ability are those involved in retention or storage of information. In terms of the operations discussed in this dissertation, memory abilities would be required for sight recognition of words and phonetic symbol identification. Divergent production which refers to generating varied information from given or known information is basic to the linguistic method of inductive inquiry. In studying the phonological aspects of language, for instance, the old dichotomy of English language sounds into vowels and consonants is expanded upon and refined through training in kinesthetic and auditory discrimination. Convergent production involves the generating of determined information from other information and has to do with the production of right answers which are generally closely determined by the given information. This ability lies at the heart of the

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<sup>24</sup> Robert Wilson in Productive Thinking in Education, p. 21.

generative-transformational approach to grammatical analysis. In this dissertation, reading is treated as a decoding skill. Especially in the beginning stages, the reading material is highly structured with few ambiguity factors; thus, demanding standardized response with little room for individual interpretation. Evaluation pertains to decisions regarding quality, accuracy or suitability of information. The oral interpretation procedures described within this study require this ability to a high degree. Oral interpretation requires both evaluative decoding of the printed literary work and vocal encoding of the work which will ring true to the previous decoding. A sub-heading under "evaluation" is "evaluation of transformations" which emphasizes correct resolution of ambiguous structure. Transformational techniques for the resolving of poetic ambiguity may be found within the dissertation. An original viewpoint of such analysis is reflected in the decoding of the poem, "West of Your City."

Throughout the dissertation, these operations are reflected in the analytic techniques proposed. It is hoped that the translation process advocated herein will bring these operations into active engagement in the process of language study and that some answers have been provided for Thelma Thurstone's query: "How best shall we bring these operations into active engagement in the process of acquiring knowledge...how best may we involve these operations acquiring knowledge...how best may we involve these operations in tasks designed to foster the versatile use of knowledge."

## CHAPTER TWO

### PHONETIC ANALYSIS AND TRANSCRIPTION

"Phonetic transcription has often been defined as a kind of alphabet writing in which each letter represents one sound and never any other--- One sound one symbol."<sup>1</sup> In his Pronunciation of English written in 1909, Daniel Jones cautioned that while this then-popular idea had practical significance, the description was not strictly accurate.

The student of language can easily test this observation through a number of experiments. For instance, he may investigate the nature of the "p" sound. Phonetically, this sound is classified as a plosive which means that an expulsion of breath is necessary for its production. Thus, if the student were to hold a thin piece of paper up to his lips while producing this sound, he would observe the movement of the paper due to the breath force. If the student were to repeat this exercise while phonating a "b" sound, he will see that although the two sounds share similarities in manner and place of production since they are both plosive bilabials, they are sufficiently distinguished in terms of voiced-voiceless contrast to warrant a separate symbol for each sound.

Extending this investigation, we could have the student analyze "d" and "t". Both are plosives. A cursory visual inspection will enable the student to distinguish between the two sounds since the lips are not involved in production of "t" and "d" as has been true of the previous pair of plosives. Therefore, although the manner of production is similar, the student must look to the place of production as furnishing the distinction

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<sup>1</sup>Daniel Jones, The Pronunciation of English, 4th. Ed. (Cambridge: Cambridge University Press, 1966), p. 27.

between the two pairs of plosive sounds.

Although not termed as such in the era of Jones, the modern communication approach termed "binary choice" by communication engineers serves as a descriptive term to represent such phonetic classification procedures. The concept of binary choice can be applied to a situation which requires a yes-no response. For example, a specific sound is either voiced or voiceless. If we apply suitable tests for identifying a sound as "voiced", we can answer the question, "Is such and such a sound voiced?" with a simple, yes or no response. Thus, bit by bit, phonetic description proceeds.

In conducting studies along these lines, the student must bear in mind that the sounds are being produced in isolation. However, human speech is composed not of isolate sounds but of sounds in series such as words, phrases and sentences. For phonemes other than those classified as glides and affricatives, there is a single position of the articulators which can be considered as standard for the sound were the sound spoken in isolation. Proceeding through the major articulation positions of labial, dental, alveolar, velar, nasal and palatal, a particular sound will either be or not be a labial. If not a labial, the sound may be or may not be a dental and so on. Through a series of linear bit-by-bit progressions, the sound is classified under that category which elicits a positive affinity.

Again, it must be noted that sounds appearing within contextual speech are molded by the movements of the tongue, lips and jaw toward and away from the standard position. Carrell and Tiffany point out that this fluidity of

movement "makes the sounds natural and gives each one the distinctive characteristics which lead to its recognition by the listener."<sup>2</sup>

The speed and timing of these movements seem to be important in the same way. The temporal factors are: the length of time taken to approach the standard position, the duration of the hold in this position and the time involved in moving away from the hold. A simple illustration can be given by way of reference to a person who habitually phonates with little or no lip movement. The consequence of this restriction of the speech mechanism will be reflected in muffled speech sounds, in indistinct formations of "b" and "p" sounds as well as in distortions of other sounds primarily dependent upon proper lip movement for their production. If the teacher is aware of the constellation of sounds primarily dependent upon lip movement, the simple expediency of urging the individual to open his mouth while speaking will prove superior to isolated practice of the particular sounds affected. Isolate sound practice can be undertaken at the beginning for purposes of establishing contrastive data; that is, having the student observe the various points of contrast between a properly articulated sound and that same sound articulated in a muffled manner.

Commenting upon the smoothness and intricacy of the speech movement pattern, Carrell and Tiffany offer this suggestion to teachers: "It may be well that in teaching and learning the speech sounds, we should place more emphasis on movement and less on position."<sup>3</sup> Certainly, teachers of language

<sup>2</sup>James Carrell and William Tiffany, Phonetics: Theory and Application to Speech Improvement (New York: McGraw-Hill Book Co., 1960), p. 243.

<sup>3</sup>Carrell and Tiffany, p. 243.

arts will have to begin to consider the individual's intonation patterning as the larger framework within which the individual speech sounds are jettisoned into rapid-fire sequences.

In that speech is a continuous articulatory flow, it should be expected that the formation of individual sounds called "phonemes" are influenced to a greater or lesser extent by the particular environment. Jones postulates that "the use of these different sounds is determined by the other sounds adjacent to them in the word or sentence."<sup>4</sup> This hypothesis may be tested both through comparison and contrast; for example, of the "p" sound in isolation as opposed to this same sound within a variety of contexts such as 'elephant', 'photograph' and the like (illustrating initial, medial and final positions within the word) as well as compared within a variety of word clusters such as one would experience in tongue twisters.

Group practice of articulatory exercises and experiments have a two-fold value in terms of translation. The students have the kinesthetic impressions associated with the production of the particular sounds and these same students, serving as auditors, can develop ear training and visual decoding skills. For variety, the student-encoders should be provided with a mirror so that they can serve as their own visual decoders. In such group undertakings, it soon becomes obvious that although each student can learn to produce a "p" sound that will be translated as such by the group

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<sup>4</sup>Jones, p. 27.

of auditors, there will be a great deal of variance within the student-encoder patterns of "p" production. Possible reasons for this great variety of allophones (slightly detectable differences within the same phoneme) may be tractable to differences in speech mechanisms, differences in dialects and differences in speech models. "The values to be attached to the (alphabet) letters vary to some extent and depend upon the phonetic context and the language or dialect which is being written."<sup>5</sup> Albert Marckwardt, in "The Structure and Operation of Language", points out that the phonemic inventory varies considerably from language to language constituting one of the major difficulties in foreign-language teaching. To cite an example, a native speaker of the Spanish language may pronounce 'eso' with the vowel of the English word, 'bet' or the vowel of 'bait' and still it will be the same word. On the other hand, 'met' and 'mate' are different words in English. Another contrastive word pair in English is illustrated by 'full' and 'fool'. Yet, these vowels are members of the same phoneme in Spanish. Marckwardt counsels that "once the phonemes in a language have been identified, we are again able to see something of a pattern in them from the point of view of articulation."<sup>6</sup>

The underlying point to be grasped is that the phoneme actually represents a bundle of sounds. Ludovici in his book, Origins of Language, describes a

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<sup>5</sup>Jones, p. 28.

<sup>6</sup>Albert Marckwardt, "The Structure and Operation of Language" in Readings in Applied English Linguistics edited by Harold Allen (New York: Appleton-Century-Crofts, 1964), p. 124.

phoneme as a "bundle of sounds or phones no two of which are inter-changeable in the same environment"<sup>7</sup> and also as "the smallest distinctive sound-feature into which a flow of speech may be divided."<sup>8</sup> Dufrenne concludes that: "The phoneme is thus identified by the relations it has with other phonemes: opposition, affinity, possibility of permutation, of substitution or even of confusion."<sup>9</sup> Another linguist, Paul Roberts, cautions that a phoneme is not exactly a single sound. Rather, it is "a collection of similar sounds which are likely to sound identical to the speaker of the language."<sup>10</sup> Bloomfield observes in Language that "the importance of a phoneme does not stem from the actual configuration of the sound waves, but only from the difference between this configuration and the configuration of the other phonemes in the language."<sup>11</sup> Perhaps, the most outspoken description in terms of exclusive reference to the principle of contrastive features is the classic definition of Saussure simply stated as "there are only differences, no positive terms at all."<sup>12</sup>

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<sup>7</sup> L.J. Ludovici, The Origins of Language (New York: G. P. Putnam's Sons, 1965), p. 99.

<sup>8</sup> Ludovici, p. 99.

<sup>9</sup> Mikel Dufrenne, Language and Philosophy translated by Henry B. Veatch (Bloomington: Indiana University Press, 1959), p. 166.

<sup>10</sup> Paul Roberts in Essays on Language and Usage edited by Leonard Dean and Kenneth G. Wilson (New York: Oxford University Press, 1963), p. 174.

<sup>11</sup> Bloomfield, p. 128.

<sup>12</sup> Ferdinand de Saussure as quoted in Dufrenne, p. 166.



Once we have isolated the smallest segments of sound within the normal speech flow so that the individual student begins to hear the differences between the various phonemes, it is natural to contemplate the grouping or bundling of these individual units through contrastive pairing within a specific environment. In no language is the entire phonetic continuum utilized. Students who are capable of speaking a second language should be asked to demonstrate sounds which do not appear within the English language phonology. The encoding and decoding tasks necessary for communicating within a language system are limited to discernible differences within the established grouping of sounds as determined by the linguistic system of the language itself.

Langacker offers this comment:

A sound may be voiced throughout its articulation, voiceless throughout, voiced at the beginning then voiceless, voiceless until the last hundredth of a second- the possibilities are endless; but for speakers of a language in which voicing is distinctive, a segment is treated as either voiced or voiceless, with no middle ground. <sup>13</sup>

Teachers may wish to have the students classify a number of the English-language phonemes according to Langacker's description. In performing such an exercise, students will find that by clapping a hand to the throat during the voiced-voiceless continuum, the felt vibrations of the vocal chords will serve as a validating instrument.

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<sup>13</sup> Ronald Langacker, Language and Its Structure (New York: Harcourt, Brace & World, Inc., 1968), p. 153.

Combining observations of place of articulation with manner of articulation, a two-dimensional grid can be constructed. A helpful reference guide to the identification of phonemes will result. Selecting a sound in terms of manner of production, let us use a stop sound as a sample. "A stop is a sound which can vary extremely little in duration because it involves a sudden release of built-up pressure."<sup>14</sup> According to Langacker, "There are an unlimited number of places where the tongue can make contact with the roof of the mouth in articulating a stop."<sup>15</sup> After naming the individual stop sounds, let the students decide what criteria constitute their being grouped under this heading. In addition, the class should be invited to experiment with a variety of encoded stop sounds. Taking turns encoding the stop sounds, the other class members should decide how many of the purported sounds of "d" and "t" etc. can actually be decoded as such.

It is interesting for the teacher to observe whether the members of the class will be highly tolerant of allophones or whether their reactions will support Langacker's statement:

As native English speakers, we tend to disregard the spectrum of possibilities and instead, treat the sound continuum as if it were divided into two discrete regions. A voiceless stop articulated with the tongue is judged to be either a "t" or a "k". There are no other possibilities; a stop pronounced with the tongue in an intermediate position is forced into one of the two molds.<sup>16</sup>

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<sup>14</sup>Paul Heinberg, Voice Training (New York: The Ronald Press Co., 1964) p. 14.

<sup>15</sup>Langacker, p. 153.

<sup>16</sup>Langacker, p. 153-154.

It has been the experience of this writer that many people are unable to distinguish sound allophones. However, many a native English language decoder is quite ready to perceive an accent or a "funny way of speaking" and this judgment extends to forms of suprasegmentals; pitch, intonation and the like. Any twist within the production of the phoneme which the decoder perceives as unusual will likely convey the information intended but in addition, will affect the attention or acceptance value placed upon the messages. In the beginning stages of language learning, emphasis upon allophonic varieties may only serve to confuse the students if the teacher insists upon the individual student duplicating the teacher's dialect. The teacher's attitude should be one of tolerance. However, gross errors in sound production should be referred to the speech correctionist's attention. The teacher should consider variant allophones in light of the student's social and regional background. It is quite difficult to establish hard and fast rules for proper production of each English phoneme. As a general rule, the teacher is advised that in order for there to be a difference, the difference in sound production must make a difference to the message decoders.

Practical considerations for the teacher to consider in his attempts to distinguish between normal and abnormal speech may be garnered from courses in the voicing and articulation of speech and in a number of easily-understood books a few of which are listed in the bibliography section of this paper. For a beginning reference point, the following criteria for deviance from generally acceptable speech was established by Robert West and is fairly uniform through speech correction books. Any one of the several descriptions

of speech pattern deviance can constitute a problem. West states:

Allowances being made for children in the speech learning period, the speech of a given person may be regarded as defective under the following conditions: 1) when his voice is not loud enough to be easily heard in the practical situations of his vocational and social life; 2) when his speech is partially or wholly unintelligible because of inaccurate articulation; 3) when his speech is partially or wholly unintelligible by reason of serious lapses of grammar, syntax or word use; 4) when, for any reason, his speech is intrinsically unpleasant to listen to; 5) when his utterance is so different in rate, rhythm, pitch, loudness, timbre or individual sounds of speech from the average speaker of his age and sex, that the difference serve to distract the hearer's attention from what is being said to how it is said; 6) when his speech is accompanied by extraneous mechanical or vocal sounds or by distracting grimaces, gestures or postures.<sup>17</sup>

In the teacher's methodology for presenting individual sounds to the class, the vowel-consonant dichotomy is deeply entrenched. The vowel-consonant dichotomy, although superficial, proves convenient since it has long been standard educational practice to categorize the written letters of the alphabet as either vowel or consonants. However, as countless linguists have argued, the spoken sound represented by the phoneme antedated written representation of the language. Furthermore, the English alphabet system does not admit of a one-to-one correspondence between letter and sound—a point belabored by those working for spelling reform. A phoneme such as "ŋ" which is a common phoneme signalled by the "ing" ending, is only loosely indicated by a combination of the two alphabet letters, "n" and "g". On the other hand, the alphabet

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<sup>17</sup>Robert West, *The Rehabilitation of Speech*, Rev. Ed. (New York: Harper & Cros., 1947), p. 8-9.

letter designated as "c" does not directly translate into a phonetic symbol. In a word such as 'cook', the alphabet letter is transcribed by the "k" phonetic symbol. In the word, 'cedar', this alphabet letter is transcribed by the phonetic symbol of "s". Although the "f" phonetic symbol consistently represents the "f" alphabet letters, sometimes, the "f" phonetic symbol represents the combination of alphabet letters-"ph" as in the word 'elephant'.

Granted that the vowel-consonant categorization has its limitations and that it is not the only means of exploring the symbol-sound relationship within our language, linguists and phoneticians have used the categories of "vowel sound" and "consonant sound" to advantage.

Standard phonetic practice considers vowel sounds to be "principally differentiated by two factors, the position of the tongue in the mouth and the shape of the lips."<sup>18</sup> A practical application of tongue position within the mouth is made by the physician who requests the patient to say, "ah", in order that the oral cavity be exposed. Other vowels require that the tongue be raised in varying degrees in the front towards the hard palate or in the back towards the soft palate. When the tongue is lowered in the mouth, open vowels may be produced. Front vowels such as "I" emanate from the tongue's reaching towards the hard palate. Conversely, back close vowels emanate from the tongue's being raised in the back towards the soft palate.

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<sup>18</sup> R. H. Robbins, Introduction to Linguistics (Bloomington: Indiana University Press, 1964), p. 95.

For a more detailed explanation of the vowel-sound classification, the reader is referred to the Appendix.

Open vowels may be additionally classified as to "front" or "back" with respect to the part of the tongue which is highest in the mouth during production of the vowel. The tongue may be raised centrally in the mouth. The results of this positioning are central or neutral vowels.

"Concomitantly with these different tongue positions, the lips may be rounded or spread, both in varying degrees or "neutral" as when the mouth is relaxed."<sup>19</sup> Since both the jaw and mouth are open widely during the open vowel sounds, it seems apparent that the open vowel position allows less variance in terms of degrees of lip spreading than is the case with other types of vowels. In order to test this assertion, it may be well to have the teacher demonstrate in continuous succession, the cascading of the vowel stream from the highest vowel "i" requiring a constricted throat with little opening between the lips down to the final lowest-positioned vowel which is the broad "a" or "ah" sound. The class should be encouraged to duplicate this demonstration.

Lip features which serve to distinguish vowel qualities can vary irrespective of the position and height of the tongue during production of most of the vowels. The student of language should examine for himself the various tongue positions involved in vowel production. Using other students as encoder models or working by himself with the aid of a mirror, the student should observe that almost all of the front vowels are characterized by a

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<sup>19</sup>R.H.Robbins, p. 96.

spreading of the lips whereas the back vowels are accompanied by lip-rounding.

Using the mirror, the student should study the shape and position of the lips in the formation of the vowels: "u" "o" and "ɔ". "If these vowels are properly formed, it will be seen that the lips are markedly protruded and rounded in the production of "u" and "o" but somewhat less so for "u" and "d"..."<sup>20</sup> Also, it should be observed that the lip movement is not nearly so prominent when these same vowels occur in running speech. For, instance, the "I" sound in the word "in" loses much of its character in the phrase, 'built-in appliances'. The schwa sound, written "ə" represents an indistinct vowel sound such as often occurs within a long word. Most likely, a student asked to decode the vowels present within the word as it appears in written form will actually substitute a schwa or two when asked to orally encode the word. Words such as "unbelievable" or "uneventual" could serve as sample words.

The speech muscles, as other bodily muscles, should not be thought of as working independently. Rather, bundles of similar muscle fiber work antagonistically to one another and yet, in harmony to achieve a particular work task. For instance, lips which move only slightly during speech production are considered to be "lazy". "Lazy lips" result in indistinct speech. Even though it has previously been noted that the lips are less prominent

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<sup>20</sup>Virgil A. Anderson, p. 285.

in the production of "ʊ" and "ɔ"; nevertheless, "some degree of rounding is still necessary if the true quality of these vowels is to be maintained."<sup>21</sup> The same vowel can be produced with a different vocal quality by a realignment of the articulatory organs. The quality of voice known as "throatiness" can be superimposed upon vowel production "by retracting and elevating the tongue, by increased tension in the styloglossal muscles and by opening the lips wider."<sup>22</sup>

Vowel sounds represent the tonal characteristics of human speech as opposed to the consonants which are more related to noise and segmentation of the speech flow. Listening to recordings of singers can alert students to the emphasis placed upon the vowels in sustaining the mood and tone of the selection. The students should be afforded the opportunity to audit several renditions of the same song. Then, the class should discuss the manner in which the vowel qualities serve to distinguish one singer's style from that of the other singers. The student, himself, may experiment with phonating different versions of the various vowel sounds.

Practice in shifting articulatory organs with the concomitant changes in other structural features should prove a readiness activity for the encoding-decoding process of diphthongization. Diphthongs have often been

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<sup>21</sup>

Anderson, p. 286.

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Heinberg, p. 167.



referred to within language arts texts as a combination or blending of two adjacent vowel letters within a word. Such descriptions are highly misleading. "Read" is a common word used within the context of language arts material. Based on the above-given definition, the child may regard the "ea" as a diphthong. The visual encoding by means of print gives no clue to two forms which this word can take when encoded in oral speech. This word in the phrase "Did you read this", receives the vowel transcription of "ɪ" whereas the phonetic vowel symbol of "ɛ" is used to transcribe this word in the context: "Yes, I have read it." In certain dialectal regions, the vowel may actually be elongated to such a degree as to result in a diphthongization represented as "ae:".

A functional, speech-process definition is offered by Virgil Anderson who declares diphthongs to be "continuous glide sounds in which the articulatory mechanism moves from the position for one vowel sound to that for another."<sup>23</sup> Certain vowels, ordinarily transcribed as simple vowels, tend to become diphthongs when elongated and may be represented as such by the placing of a colon after the phonetic symbol. However, it is not to be inferred from the above that the mere prolongation of a vowel results in diphthongization.

Robbins states:

Long vowels involve the maintaining of an articulatory position relatively constant, but temporally equivalent articulations may be made by moving from one vowel position to another through the intervening positions.<sup>24</sup>

The sounds which fall into the latter category, Robbins designates as "diphthongs". The following set of diphthong description may be used as a

<sup>23</sup>Anderson, p. 307.

<sup>24</sup>Robbins, p. 97.

teaching aid for identifying diphthongs tongue position within the oral cavity and by certain features of lip movement:

<u>Symbol</u>	<u>Description</u>	<u>Key Word</u>
ei	front, half close to close, spread lips	make
ou	back, half close to close, rounded lips	hole
i	back, half close to close, pursed lips	boil
ai	back, open with rounded lips to front close with spread lips	like
au	central, open with lips neutral to close back with rounded lips	cow
i	front, close with spread lips to central half close with lips neutral	ear
	front, half open with spread lips to central half close with lips neutral	where
u	central half close with lips neutral back, close with rounded lips to central half close with lips neutral	war
	(These last three symbols serve to differentiate various "r"s and "r" substitutions in the Eastern dialect) front, half close to half open, spread lips (dialectal version heard in midwest, especially parts of Chicago)	dance

With regard to the terms "half close" and "half open", it should be noted that some phoneticians prefer "slightly open" or "almost closed." For those phoneticians who prefer the former terms, a half-close position is closer than "half open."

As the class members engage in encoding and decoding these diphthongs, the teacher should encourage the class to observe differences. Are the differences due to allophonic variation, to lack of lip movement or perhaps, to dialectal differences. In conducting such exercises, the teacher will find linguistic atlas publications and guides of great help in treating the vowel sounds peculiar to different regions. The writer recommends

the following studies as particularly adaptable to classroom exercises:

Discovering American Dialects by Roger Shuy; Recordings of Standard English in the United States and Canada prepared by A. L. Davis and Language in Society by Jean Malmstrom.

In considering vowel sounds as influenced by regional variation, the "triphong" is sometimes employed. Robbins observes that "the passage from one vowel position to another may not be by the most direct route; where a detour, as it were, is made, a sequence sometimes called a triphong results."<sup>25</sup> He offers these example of triphongs:

central, open with lips neutral via front close with  
spread lips to central half close with lips neutral

central, open with lips neutral via back close with  
rounded lips to central half close with lips neutral

back, open with rounded lips via front close with  
spread lips to central half close with lips neutral.<sup>26</sup>

Carl Cass, in his book A Manner of Speaking, lists a triphong as "the allophonic variety of a dipthing".<sup>27</sup> Cass cites the example of "ɔ̃" as a dialectal allophone of "ɔ". He also cites "eɪ" or "ɛɪ" as in 'hair' claiming that these dipthongs are used by the Eastern and Southern speakers in substitution

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<sup>25</sup>Robins, p. 97.

<sup>26</sup>Robins, p. 97.

<sup>27</sup>Carl B. Cass, A Manner of Speaking (New York: G. P. Putnam's Sons, 1961). p. 121.

for the more common sound of "ʌ".

As the instrumentation and scope of dialectal study become more advanced and sharply defined, the classroom teacher can be provided with a highly accurate guide of vowel production as it occurs in various areas of the country. Perhaps, at that time, the "funny sounds" of the Southern dialect as it impinges upon the Northern ear will actually serve as a vehicle for cultural exchange and understanding.

As previously noted within the discussion of vowels, the vowel phonemes of speech carry the melody and tone during the speech act while the consonants serve as stops or breaks in the word flow. Although the permutation rules of the English language dictate, with few exceptions, that a vowel must be represented within every syllable, it is none the less true that the use of consonants far outweighs the use of vowels within word patterns. A typical word unit such as the syllable may be thought of as noise-tone-noise or c-v-c. No doubt this observation made on the part of a receptor whose language is laden with tonal quality gives rise to the title of "ugly American."

In confronting the students with the phonetic symbols pertinent to consonants, it would be well to condition them in a series of successful attempts in translating the sounds of speech into phonetic symbols by beginning with the phonetic symbols which are already familiar to them in the form of regular alphabet letters.

Although the reader will find in the Appendix III, a grid for presenting the consonants in terms of manner and place of production, it may prove worthwhile to examine some of the unfamiliar phonetic symbols in some detail.

The "ŋ" is a voiced nasal continuant formed by a shutting off of the mouth passage at the back. This is accomplished by raising the back of the tongue against the soft palate which is sufficiently lowered so as to permit free passage for the sound through the nasal chambers. "In most cases any combination of "ng" or "nk" letters is pronounced with an "ŋ" sound which may or may not be followed by a "g" or a "k" sound."<sup>28</sup>

There is a common tendency to substitute the "n" for the "ŋ", sometimes known as "dropping the final letters." This is often a result of rapid, clipped speech or lazy lip movement. Speakers influenced by certain European languages, add a schwa after the sound which is an unnecessary intrusion easily detected by auditors not using this pattern. In the writer's experience, this is quite a difficult pattern to erase, possibly because the formation of this sound permits no visual clues to its encodement and few kinesthetic ones. The writer has found it helpful to alert students to detect an intrusion of this schwa sound by checking the movement of the Adam's apple during sound production. For proper encoding, the throat muscles should be taunt and subsequently released with no accompanying sound. If students, while holding their hands to their throat, feel the muscles move immediately after the "ŋ" sound and feel vibrations in the throat, they can be assured that they are phonating the schwa sound. The ears of the teacher should also guide the student as to whether or not he is properly articulating.

The sound represented by the symbol, "6", is phonated by forcing unvoiced breath between the flattened tip of the tongue and the inner edge of the upper teeth. The alphabet-letter sequence of "th" is often translated by this symbol in words such as 'death', 'earth' and 'path'.

The symbol " " represents a twin to the "6" sound in that they are both made in practically the same manner. The distinctive contrast is afforded by the fact that the formerly discussed sound is voiceless while the present sound under discussion is voiced. The distinction can be easily brought out through whispering such word-pairs as "either and ether" or "mouth and mouthe." The teacher should be alert to the fact that certain speakers, particularly in Chicago, substitute "t" and "d" sounds for those of " " and "6".

The " " is articulated with the lips slightly rounded and extended forward in such a way as to allow a thin jet of unvoiced breath to escape between the tip of the tongue and the alveolar ridge. The common letter combination associated with this symbol is "sh" in such as word as "shortening". Other spellings which are translated by this phonetic symbol occur in words such as 'ocean', 'sure', 'chassis' and "rational".

The " " sound is made approximately akin to the " ". However, the " " is a voiced sound. Both these sounds are common within slavic languages. The " " sound seems to occur only within English words borrowed from European languages. Misinformation can result in attempts to establish a too-close or a one-to-one relationship between this phoneme unit and alphabet letter.

Carl Cass makes the following observation:

Although the dictionaries common use "zh" as a means of representing this sound, there is no common manner of representing it in conventional spelling. The sound occurs in such words as: asia, azure, beige, bijou, closure, garage, glazier, measure, pleasure, prestige and rouge.<sup>29</sup>

The students should be encouraged to mention other examples of words in which this sound appears. Students who have access to a foreign-language background should be invited to cite examples from other languages.

Generally, the "j" sound is associated with the letter "y". This sound is a glide and is voiced, as are all glide sounds. The "j" is initiated through a narrow opening created between the tongue and the hard palate. However, the tongue glides immediately to the proper position for the particular vowel which follows. An interesting comparison may be made between this sound and the high, front, tense vowel "i". The initial tongue positions are similar.

The "tʃ" is actually a consonant blend of the voiceless sounds "t" and "ʃ" resulting from exploding the first sound component into the second. Perhaps, the explosive nature of the union prevents consonant blends from being considered as diphthongs.

The phonetic symbol "d" also represents a blend resulting from an exploding of one sound into another. In this case, the voiced "d" is exploded into the "ʒ". Usually, the alphabet letters "j" or "g" signal this sound in such words as: 'fudge', 'Jim', 'adjacent' and 'gauge'. The word 'judge'

is helpful as a key word since the sound is represented both at the beginning and the end of the word.

The symbol "hw" represents a glide and signalled by the letter combination of "wh" as in "whom". The sound is initiated with the lips rounded to a small circular opening as in puckering while the tongue is held high in back for the sound of "u". In rapid sequence, the lips and tongue move to the proper positions for the next vowel sound. Due to the "h" aspect of the glide blend, the sound is initially voiceless. Many speakers do not employ this sound, preferring to substitute the isolate "w". Formerly, it had been highly advocated as a mark of distinction in the speech.

Experience has proven to this writer that in approaching encoding-decoding exercises, it is absolutely essential that the teacher maintain a relaxed, friendly attitude wherein the students exchange information concerning phoneme encoding and decoding in the spirit of inquiry rather than deprecation.

Physiological classifications of the speech coordinations proceed exceedingly far beyond the confines ascribed to them within this dissertation. Electronic and X-ray analysis have enabled communication scientists to reconstruct the speech waves and other characteristics of an individual's utterance. Machines have recently been devised so sensitive to individual voice patterns that they can be used to identify individual people speaking into the machine much as writing on the back of a check serves to identify the endorser. An introduction to such machines and models of various communication systems along with filmed presentations and models of the human communication system



afford the students greater insight into the intricacies of the speech mechanism as a complex system operating, in part, on contrastive data monitored through a binary system.

An understanding of the "phoneme" and consideration of the various phonetic symbols is a prerequisite to the study of transcription technique. Transcription technique enables students to translate with a high degree of accuracy the sounds of actual, running or connected discourse. Transcription is an aid to speech improvement since it can precisely delineate for the student those areas and aspects of his speaking which need improvement. The ear training provided through transcription exercises enables him to carefully audit his own speech pattern in relation to the speech patterns of his contemporaries. As a teacher having guided students through transcription exercises, this writer is impressed with the resultant increases in ability in auditory discrimination and in concentration powers.

The rationale behind devising a set of phonetic symbols for the study of speech is explicated in the criteria drawn up in 1888 for the construction of the International Phonetic Alphabet which is the oldest phonetic transcription system.

The guiding principles for this I.P.A. System are:

1. There should be a separate letter for each distinctive sound; that is, for each sound which, being used instead of another, in the same language, can change the meaning of the word.

2. When any sound is found in several languages, the same sign should be used in all. This applies also to every similar shades of sound.
3. The alphabet should consist as much as possible of the ordinary letters of the Roman alphabet, as few new letters as possible being used.
4. In assigning values to Roman letters, international usage should decide.
5. Diacritic marks should be avoided, being trying on the eyes and troublesome to write.<sup>30</sup>

Daniel Jones states that for a transcription system to be useful, the transcriber must explain: "what sounds are meant by his symbols and what conventions are to be understood when he uses symbols in different phonetic contexts."<sup>31</sup> William Mackey in his book, Language Teaching Analysis, insists that not all systems of phonetic transcription are equally good. He considers it to be especially important that a beginner in the study of phonetics be introduced to phonetic transcription through a system which meets his eight-point criteria. Teachers of language arts should decide upon a system which features:

1. Analytical adequacy: the notation must be able to represent the results of the analysis.
2. Clarity: the relation between the parts must be self-evident.

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<sup>30</sup>

James Carrell and William Tiffany, p. 47.

<sup>31</sup>

Daniel Jones, p. 29.

3. Legibility: the symbols must be easily read.
4. Produceability: the symbols must be easy to print.
5. Concision: the use of configurations must be economical.
6. Visual suggestion: the forms should suggest what they stand for.
7. Range: while expressing the analytical minimum, the notation should also be capable of recording the perceptible maximum; for example, dialectal variations.
8. Synthesis: although each level may be noted separately in analysis, it should be capable of appearing again in a synthesis which constitutes a reflection of the utterance as a whole; it should be possible to read the whole utterance at once....<sup>32</sup>

However, regardless of the transcription method used, the basic unit for translating the individual sounds of the language is the phoneme.

The teacher should be aware that there are common transcription signs to which most systems adhere. One such conventional mark is a dot subsumed under an individual phonetic symbol to indicate that this particular consonant is performing the vowel function in lieu of the vowel which is normally present within a syllable. The nasals and the lateral "l" very commonly form syllables without the benefit of a vowel; for example 'rotten' is often articulated as 'ratn' and 'bacon' often becomes 'bekn' in connected speech. A syllabic nasal may have a different place of articulation than it has in

its nonsyllabic form. The change is due to its assimilating to the position of the preceding stop. In certain expressions, the word, 'and', is abbreviated to "n". How are the following expressions articulated within rapid speech: sweet and sour; jam and jelly; ham and eggs; keep them coming; that will be all?

A colon following a symbol indicates that the phoneme is prolonged. Cass points out that "In Eastern or Southern speech, the colon is needed to distinguish the pronunciations of words like 'heart' and 'hot' which are transcribed as "hɑ: t" and "hɑt" <sup>33</sup>. A colon may be used to indicate a kind of prolonged consonant sound as in 'bookcase' where the "k" sound is actually divided in half by a slight break in sound continuity. An implosion is heard followed by a pause and then an explosion. Some people do not divide such words, preferring to spew forth their double articulations of the plosive sound. It is recommended that whenever such plosives occur back to back within such a contiguous environment, an assimilation should ensue such that the first consonant is represented through the implosion and the adjacent identical consonant represented within the explosion. A common method to indicate such integration of two adjacent consonants is the garland mark: dark — itʃɛn.

Accent marks are used in phonetic transcription. However, the accent marks employed within phonetic systems are vertical and precede rather than

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Carl Cass, Op. Cit., p. 127

follow the accentuated syllables. A common method of distinguishing a primary syllable from a secondary one is the placing of a primary accent mark above the word segment while a secondary accent mark is placed below.

In phonetic transcription as well as in the diacritical system used by some dictionaries, a wavy line placed above the symbol represents a nasalized sound. Such a sound is customarily found in French words or Spanish words absorbed into the English language that have not been entirely anglicized in the process.

Dependent upon the view of the particular phonetician, the conventional marks of punctuation such as periods, commas, semicolons and the like may be used. The apostrophe, however, is not considered to be necessary in transcription since its use would indicate no difference in sound. For example, contractions are not accorded special recognition within transcription but are recorded as ordinary sound segments: 'kænt', 'dount'. Usually, the formation of the possessive is presented by way of observation of the printed apostrophe symbol. The possessive may also be approached through sound change. Phonetic transcription represents the oral encoding of the phrase 'the house of John' as *ðə haʊs əv dʒən* whereas the oral encoding of 'John's house' is phonetically translated as *dʒənz haʊs*. Visually inspecting these two forms, we see an addition to the transcription of 'John' which is quite prominent in the auditory decoding of the possessive noun.

The language learner who has had practice in the encoding and decoding procedures within the various systems of phonetic representation should be aware that the different types of systems can be said to fall at various points

within a continuum ranging from narrow to broad transcription.

If the language learner requires a high degree of accuracy in phonetic detail for purposes perhaps of speech correction or dialect study, the student would be advised to select a system using symbols in such a precise manner that an utterance may be minutely analyzed into sounds and suprasegmental sound features. Transcriptions whose sole aim is "accuracy of phonetic detail are called narrow transcriptions."<sup>34</sup> In response to linguistic scholars who required a finely delineated system of phoneme representation, the International Phonetic Association has been responsible for a set of symbols widely used in Great Britain and to a large extent in the United States. This system provides a table wherein the IPA symbols and modification marks express quite fine shades of phonetic detail. This chart undergoes periodic revision. This IPA system claims to provide a phonetic symbol for each distinguishable sound unit of every known language.

In this book, Voice Training for Speaking and Reading Aloud, Paul Heinberg favors the International Phonetic Alphabet representation because "the symbols are simpler, it may be written more rapidly."<sup>35</sup> In the preface to their book on phonetic theory, James Carrell and William Tiffany cite these additional reasons for adherence to the general pattern of analysis dictated by the

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<sup>34</sup>

Robbins, p. 95.

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Heinberg, p. 8.

## International Phonetic Association:

First, it appears to be better adapted for a simplified treatment, particularly for those whose native language is English or for those who have already learned English in the traditional way. Second, the I.P.A. notation conforms to the usage and to the symbol systems which are most widely used in phonetic literature. Finally, there is the very important practice growing out of the fact that what is perhaps the best and most authoritative American pronouncing dictionary, that of Kenyon and Knott, A Pronouncing Dictionary of American English, published by Merriam Co. in 1944 is based on the I.P.A.<sup>36</sup>

At first glance, the narrowness or specificity of transcription that can be obtained may seem superfluous. Yet, it is truly amazing as to the precision with which the ordinary, language-user can imitate another person's pronunciation or detect an errant pronunciation in a particular word encoded by another. Often, the person who is formally untrained in phonetics can in addition to identifying speech patterns peculiar to his area, pinpoint a particular dialect to a certain segment of area or population within his native city. The phrase, 'he speaks my language', is no mere cliché. The classroom teacher may test the accuracy of common-folk speech perception. One way of measuring such perception is to have a few students individually read a passage specifically devised to contain sounds distinctive to the region wherein the class is conducted. The readings are presented to the class members via a taperecorder. The major task of the audience is to distinguish the "locals" from those students who are not native to the area. The class

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<sup>36</sup> Carrell and Tiffany, Preface, vii-viii.

can discuss, perhaps with access to a linguistic atlas guide, specific regionalisms present within the speech patterns of individual class members.

Another similar project is to test the effect of bi-lingual environment upon the child's encoding of English. What sound elements carry over from one language into the other? How can the child be assisted in making transitions from one language to another? Providing exercises requiring encoding and decoding of such common speech substitutions as "d" from "th" or "in" for "ŋ" will prove a value to many students. If the class is fairly homogeneous in terms of their having a pronounced foreign-language interference problem with English sounds, it would be helpful to compile a list of deviate sounds showing by means of phonetic symbols, the second-language equivalents of the English-language sounds. Phonetic symbols, being so depicted as to suggest the mechanism of making the sounds, practice in the narrow phonetic transcription will serve as a visual reminder to the student which he can link with the physical production of the sound. Once the few "key" deviate sounds are identified, visual, kinesthetic and auditory processes can be employed in describing the noise (sound malformation) which has crept in during the individual's attempt to bridge from the sounds of one language to the equivalent sounds in the target language.

Employment of narrow transcription has another practical application to the language classroom in that it affords a means of indicating exactly what speech sounds are used in rapid sequence while speaking. The word, 'and', is very frequently used in running speech. Almost always it is



encoded in a clipped or abbreviated form. Cass relates five ways of transcribing 'and' as it occurs in connected discourse:

For relatively slow and careful speech, the word is pronounced 'ænd' but as it is uttered with progressively greater subordination and speed, it may be pronounced nd, n, nd or merely 'n'.<sup>37</sup>

Narrow transcription is a means of making students aware of not only individual habits of encoding speech but also of the differences elicited in running speech as opposed to isolate word production on the part of the same individual. Even within narrow transcription, phoneticians do not distinguish sounds to the limit of discriminability.

Broad transcription is represented by various diacritic systems. According to Paul Heinberg, "A diacritical system has the advantage of enabling one to read dictionary pronunciations."<sup>38</sup> It must be borne in mind, nevertheless, that the diacritical system of a particular dictionary is often limited to the entries within that dictionary. The issue of which system to incorporate into language learning is by no means settled and perhaps, an unequivocal answer should not be sought. A teacher should not become discouraged from selecting one system over another providing the system is in

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<sup>37</sup>

Cass, p. 128.

<sup>38</sup>

Heinberg, p. 9.

fairly wide use and in the main, conforms to previously-established transcription guidelines. Paul Heinberg offers reassurance: "...learning another phonetic system is quite easy once any one system is mastered."<sup>39</sup>

Since most dictionaries use a system of simplified spellings and diacritical markings, teachers and students should be familiar with many of these clues to word pronunciation. The 1962 Edition of Webster's Dictionary published by Little and Ives reflected increased pressure towards a closer phonetic correspondence between dictionary symbols and the sounds as actually used within our language. The Preface to the Dictionary notes that the use of notation systems is represented by two keys. "Key Number 1 is directed to the popular phonetic spelling for the use of the general reader whereas Key Number 2 is the system of phonetic notation summarized for advanced students."<sup>40</sup> Much of the introduction to use of the diacritical systems is devoted to criticism of the inconsistencies to be observed in comparing the written forms of words with the conventional pronunciation of the same words. The Preface explains that "the same letter does not always stand for the same sound; it is redundant- the spellings of many words contain letters of which spelling takes no account....."<sup>41</sup>

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<sup>39</sup>Heinberg, p. 9.

<sup>40</sup>The Little and Ives Webster Dictionary, (New York: J. J. Little & Ives Co., Inc., 1962), xii.

<sup>41</sup>The Little and Ives Webster Dictionary, (New York: J. J. Little & Ives Co., Inc., 1962), xix.

The editor bemoans the lack of provisions for accentuation under the first system. Clearly, the second system is favored. Among the advantages of using a phonetic system, the Preface makes mention of the consistency in that the same letter stands for the same sound; economy in that letters are not written in those instances where there is no accompanying sound and use of the acute accent to indicate strong stress and use of the grave accent to indicate secondary or weaker stress. In summary, the first system receives the "fairly accurate" rating in terms of signalling correct pronunciation whereas the second system is considered more precise and "distinguishes more minutely the various sounds and shades of sounds which occur in English speech."<sup>42</sup> The editor takes pride that the more elaborate system is "in accordance with the principles demanded by exact notation employed by philologists today in scientific descriptions of pronunciation and in the discussion of linguistic facts."<sup>43</sup>

Other modern dictionaries have adopted to some extent the viewpoint and findings of linguists. For instance, the American College Encyclopedic Dictionary bearing the copyright of 1952 was edited by Clarence Barnhard and dedicated to Leonard Bloomfield. Mentioned as consultants to the dictionary are Bernard Bloch, Albert Marchwardt and Zellig Harris. Immediately preceding the word entries, a table is given which relates the most frequent spellings of each sound with the phonetic symbols of the American College Dictionary and the International Phonetic Alphabet. The 1961 Edition of Britannica World Language Dictionary was combined with Funk and Wagnalls' Standard

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<sup>42</sup>The Little and Ives Webster Dictionary, xiii.

<sup>43</sup>The Little and Ives Webster Dictionary, xiii.

Dictionary and includes several phonemes usually ignored within an English language dictionary. As each of these phonemes is listed, a description of how the sound is produced is given. The schwa symbol (ə) is used for the unstressed neutral vowels. The Preface proclaims that "The pronunciations in this dictionary have been compiled by editors trained in phonetic and acquainted with the facts of the spoken language."<sup>44</sup>

The dictionary custom of presenting sounds in conventional word groupings may be both an advantage and a disadvantage. It must be admitted that words are usually thought of as the building-block forms of our language. Learning a root word, for instance, enables us to easily command its derivative word forms. Yet, the dictionaries are concerned only with the ideal pronunciations of single words standing alone. "There is no need to indicate changes in pronunciation that might occur in rapidly flowing speech as a result of subordination, speed of utterance and the influence of speech sounds preceding and following....."<sup>45</sup>

Thus, a natural order of presenting the sounds of our language would imply a comparison and contrast between the dictionary symbols and the international phonetic symbols so that an easy transition could be made from the known symbols to the unknown symbols. In addition, transition must be effected from pronunciation of the single word to the word within phrase and sentence groupings. H. E. Palmer recommends gradation in language learning.

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<sup>44</sup>Britannica World Language Dictionary, (New York: Funk & Wagnalls Co., 1961), x.

<sup>45</sup>Cass, p. 117.

He states that the teacher should "cause the student to pass from the known to the unknown by easy stages, each of which will serve as a preparation for the next, and thereby secure a constantly increasing rate of progress."<sup>45</sup>

Palmer's final stage in the order of language learning progression urges the language teacher to have the students "learn how to convert 'dictionary words' into 'working sentence-units'."<sup>46</sup> Dictionaries tend to record judgments as to how a particular word should be said. Accurate phonetic transcription allows the student to record language as it is actually encoded.

Phonetic transcription can be used as an aid in the study of speech styles. A style may refer to a person's overall pattern of speech or it may be restricted to the designation of "subcategories of an individual's speech, used according to the situation he is in."<sup>47</sup> For example, a student's deliberate style which may be exhibited in a formal speech before the class may differ from his casual style used with friends or his intimate style used within his immediate family circle. Shuy explains that "Whether a response is one word or a long explanation may also cause a change in style. Emotions also matter....." <sup>48</sup> The addition of social variations to those of age and geography and history makes a description of speech style a rather complex task. Shuy feels

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<sup>45</sup> H. E. Palmer, The Principles of Language-Study (London: Oxford University Press, 1964), p. 38.

<sup>46</sup> Palmer, p. 106.

<sup>47</sup> Roger W. Shuy, Discovering American Dialects (Champaign: N.C.T.E., 1967) p. 64.

<sup>48</sup> Shuy, p. 65.

that the study of style has significance for every speaker:

First, we can understand why our dialects identify us- and we can change both our speech and the resulting identification if we wish. Second, we can recognize the dialects of others for what they are: results of forces over which they have little control. Instead of reacting with contempt or confusion, we can begin to appreciate the richness of variety in the English language.<sup>49</sup>

John Kenyon feels that an elementary knowledge of phonetics will alert the student to a realization that there is a difference in the style of educated speakers due to regional effects. Not only does the study of dialectal features increase our tolerance for forms which differ from our native locality but a student of phonetics learns to expect a variance in pronunciation and eventually, he will develop a respectful, intelligent interest. In the words of Kenyon:

He is apt to learn that certain tendencies he has been tempted to criticize are just as natural and reasonable as many that he follows himself. As his observation becomes more accurate, he will cease to help perpetuate such popular fallacies as... The Bostonian drops all his r's or that every Englishman drops his h's. He will learn that he has been observing the speech of others only in the most superficial and fragmentary way...<sup>50</sup>

Textbooks written both for professional actors and amateur or student actors advocate the study of phonetics as a tool in role identification. In Evangeline Machlin's Speech for the Stage, a great many exercises are devoted to developing critical listening skills. The student's ear must, of course,

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<sup>49</sup>Shuy, p. 65.

<sup>50</sup>John Samuel Kenyon, American Pronunciation (Ann Arbor: George Wahr Publishing Co., 1950), p. 5.

be developed to recognize certain speech qualities which may guide him in efforts to reproduce the patterns. Machlin also describes a second kind of listening which "teaches you a method of analyzing a speaking voice by isolating and judging each of its qualities to the best of your ability."<sup>51</sup> She requires the student to back up his judgment in each case "by selecting and listing the word or phrase in which you hear that quality illustrated."<sup>52</sup>

The writer of this dissertation wishes to propose that phonetic analysis be applied to discovering idiolectal (the dialect peculiar to an individual) patterns for character study as experienced within the study of fiction and especially that of plays since this art form is so heavily dependent upon dialogue exchange for characterization.

As has been discussed, a person's speech pattern is influenced both by his regional pattern and by his social class within that pattern. The rapidity of his speaking rate, the flexibility and coordination of his speech musculature, his emotional state and the formality of the situation all contribute to speech pattern. These dimensions can help to measure idiolect and it is this idiolectal pattern which is essential to character differentiation and description in fictional works.

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<sup>51</sup> Evangeline Machlin, Speech for the Stage (New York: Theatre Arts Books, 1966), p. 10.

<sup>52</sup> Machlin, p. 10.

John Kenyon was one of the first linguists to emphasize the need for recognition of the functional values of colloquial language which may be used to some extent in both formal and informal situations. In so doing, the analysis of language patterns began to emphasize the situation wherein the utterance was spoken. Another outcome was the popularization of the view that language levels are not strictly separate but do impinge upon one another. An interesting graphic representation of the above concept is provided in the American College Dictionary through a system of interlocking circles representing levels of usage.<sup>53</sup> One of the circles, labeled "X", indicates formal literary English which is found in the words, expressions and structures of serious books. The circle designated "Z" represents illiterate English or the expressions of the uneducated. Between the two circles is that of "Y" which roughly indicates the colloquial English which supposedly includes the words, expressions and structures of the informal but polite conversation of cultivated people. In terms of applying this design to identifying character, the words and expressions of the particular character could be resolved into its appropriate level or levels. Jargon and the slang are useful in depicting the person's occupation and often, his attitude as well.

Accent patterning gives clues as to his speech tempo and vigor. If the character is overbearing or a bully, he is likely to have primary accents predominate. A person who is supposed to be angry may exhibit a heavily-accented stream of speech whereas a person who shows fear may frequently

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American College Dictionary, xxx.



interrupt his speech flow with extraneous words or sounds.

Other articulatory features such as the dropping of word endings, the distortion of sounds within words and constant recourse to expressions such as "see" or "you know" furnish clues as to the individual's social background and certain aspects of character; for example, carelessness or lack of confidence.

Presenting the student of literature or drama with such a phonetic network for the eliciting of character representation through dialogue will also serve as a review of phonetic analysis and, perhaps, encourage the student to examine his own speech patterns in the light of possible impressions made upon his audience.

The regional dialectal pattern may or may not be of significance to character delineation within a particular work. For instance, "The Adding Machine" by Elmer Rice does not pinpoint a particular city. For purposes of the play, only the image of the location as being a large, industrial city is needed for plot and character development. The names of the leading characters, Mr. & Mrs. Zero, symbolize the faceless, anonymous inner-city resident which this play focuses upon. Throughout the play, the characters exhibit the same sterile dialectal forms. The patterns of dialogue reflect social class rather than regional influence. Word endings are regularly dropped. One word crushes another as in 'cancha' and 'dunno'. A dull, repetitious pattern of accentuation is the characteristic diction throughout the play. An excerpt from the first scene should illustrate this type of

dialogue:

Zero: Speed it up a little, cancha?

Daisy: What's the rush? To-morrer's another day.

Zero: Aw, you make me sick.

Daisy: An' you make me sicker.<sup>54</sup>

If this play were presented in Chicago, the Chicago accent would be common to the characters provided the actors were Chicago natives or for purposes of audience adaptation, wished to establish the locale of the play as Chicago. The vital element is to show the conformity and lack of variance within the commonly-shared regional dialect.

In distinction to this type of play, other plays use sub-levels of regional dialect to effect characterization and social pretensions. "The Little Foxes" is a play rich in regional and social commentary. The play features Southern characters. Characters aspiring to gentility employ the melodious, broad vowels. Characters attempting to attract attention elongate the vowels and use frequent pauses. A famous character in a British comedy of manners, Mrs. Malaprop, was a bit given to putting on airs. Her love for gargantuan words resulted in the misplacing of accent marks and transposition of speech sounds as well as other idiosyncracies which inspired the coining of the term, 'malapropism' in her honor. The identification of regional patterns can signal turns of plot as well as characterization. In the

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<sup>54</sup>Elmer L. Rice, "The Adding Machine" (New York: Doubleday, Page & Co., 1923), p. 9-10.

great Western epics of the American theatre, local townspeople use deviance in accent to "sniff out" the stranger in town or the outlaw-at-large.

A character's idiolect must be examined for pet phrases or words of an unusual nature. There are numerous stock characters who have been sprinkled throughout plays. Often, these stock characters are used to lend ethnic flavor to the dialogue. The audience can easily identify the user of "Be Gory" as Irish or the encoder of "that'sa right" as Italian. Vocalized pauses have also been indicated to represent uncertainty on the part of the character or perhaps, to add a comic dimension to the character.

Thus, an individual's idiolect is a composite of regional, social, educational influences as well as a derivation of his personal feelings, attitude and emotional states. The writer has tried to indicate that in terms of particular characterizations, one set of phonetic description such as regional phonemes may prove the key to the character or interplay of characters whereas, another characterization may be only briefly sketched in terms of slang, jargon or ethnic stock phrases. In beginning such an approach to character analysis, it would be best to initially consider the regional dialect since the regional dialects have been documented in various pronunciation documents and guides and consequently, rely very little upon the interpreter's subjective judgment. With reference to grade levels in which the analysis of literature proceeds on quite elementary terms, the analysis of character may not extend beyond the level of regional speech patterns. More advanced students should gain confidence as a result of starting from a highly-structured analytic framework to a more loosely-assembled pattern of

individual deviance as manifested in stops and pauses, in degrees of alliteration and assonance and changes of speech manner within different contexts. Within the Appendix, the reader will find a guide to depicting certain regional dialects.

Obviously some writers are more skillful than are others in "fleshing out" characters in terms of their speech patterns. An author such as Eugene O'Neill is able to achieve an intimate characterization in terms of idiolect. The following excerpt from his play, "The Hairy Ape", demonstrates how attendance to phonetic aspects of language can translate the prosaic description, "Paddy is an old sailor, traveling the seas", into a "real-life" individual. For convenience, the writer has underlined the prominent phonetic clues. The selection is in the form of a monologue given by Paddy:

We belong to this, you're sying? We make the ship to go,  
you're sying? Yerra then, that Almighty God have pity  
on us! Oh, to be back in the fine days of my youth,  
ochone!... clippers wid tall masts touching the sky=  
fine strong men in them=men that was sons of the sea as  
if 'twas the mother that bore them...Yerra, what's the  
use of talking? 'Tis a dead man's whisper. 55

Phonetic analysis assists in the proper encoding of the student's speech patterns while offering insight into speech personalities of others. As the student concentrates upon the phonetic elements of utterances, he comes to the realization that "every speaker of English is a speaker of dialect."<sup>56</sup> Recent publications of N.C.T.E. express concern for adapting the language arts to meeting changing needs in a world of massed groups and of conflicting views. The English teacher must recognize the relationship between social order and language usage. The Council urges attention to individualization of patterns within language usage, stating that:

Special emphasis should be given...to the fact that the locus of every social problem is in an individual personality, striving to find some security within himself through which he may hope to be equal to the conflicting demands of the life about him.<sup>57</sup>

Charles Fries, an early advocate of objective surveys of the English language as it is actually used in America, offered incisive commentary upon regional differences inherent in a language spread over the entire country. In his article, "Usage Levels and Dialect Distribution," Fries cites this passage from Steinbeck's Grapes of Wrath:

"I knowed you wasn't Oklahomy folks. You talk queer kinda- That ain't no blame, you understan'."

"Ever'body says words different," said Ivy, "Arkansas folks says 'em different, and Oklahomy folks says 'em different. And we seen a lady from Massachusetts, an' she said 'em differentest of all. Couldn't hardly make out what she was sayin'."<sup>58</sup>

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<sup>56</sup> N.C.T.E. Language Programs for the Disadvantaged (Chicago: N.C.T.E., 1965), p. 271.

<sup>57</sup> Martin Joos in Language and Learning edited by Janet Emig, p. 11.

<sup>58</sup> Charles C. Fries, "Usage Levels and Dialect Distribution" in the Preface to the American College Dictionary, xxix.

## CHAPTER THREE

## PHONEMIC ANALYSIS AND APPLICATION

In analyzing the phonological features of the language, phonemic analysis utilizes contrastive data to identify minimal pairs. The words, 'pare' and 'bare' are minimal pairs since the words share similar sound features except for the initial consonant. Distributional analysis is a highly technical application of searching out representational phonemic elements of a particular language. George Miller feels that to be recognized as an actual sound difference within the system of a particular language, the several instances in which the two sounds appeared in the same phonetic environment must result in the words symbolizing different things. He explains that although there are several phonated varieties of the "p" sound, this sound as reflected in the English language encoding-decoding system need have only one phonetic symbol. Miller observes that:

In English, the aspirated and the unaspirated varieties of /p/ (phonemic analysis uses brackets) never occur in identical environments. There are always other differences around them somewhere. Since these other differences can serve to convey the information, the distinction between p, and p- is irrelevant in English.<sup>1</sup>

These varieties of the "p" sound are designated in the transcription of a professional dialectician or in the writings of a field linguist but are unnecessary for the purposes of most language learning. The crucial point of whether or not to list phoneme varieties revolves about "whether or not the phones appear in the same environment."<sup>2</sup>

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<sup>1</sup>George A. Miller, p. 21-22.

<sup>2</sup>George A. Miller, p. 22.

If they are occasionally preceded and followed by identical phonemes, the distinction is essential. If they are never preceded and followed by identical phonemes, the distinction is not relevant.

In their classic publication of 1942, Bloch and Trager laid down a technique for analyzing the phonetic transcription of a language to discover its basic phonemes which resulted in a significant refinement of phonemic analysis.

The translation into phonemic representation begins with the alphabetization of all the speech units having been phonetically transcribed. If two initial phonemes are phonetically similar but not identical and never occur in front of the same phones, there is no need to distinguish between them. Thus, they would be grouped within the same phoneme. The result of this first step would yield a list of initial phonemes, each of which is defined by the phones that are brought together to form it. This operation is repeated for all other positions in the speech units. The speech units are alphabetized as to the second phone, then the third, etc. For each position, a list of phonemes is defined by the phones that occur in that position.

These distilled lists of phonemes are compared and combined for all the different positions with the objective of constructing a master list of phonemes. At this point, the number of phonemic symbols may be again reduced. If two phonetically similar, though not identical, phones never occur in exactly the same position, they are classed as the same phoneme. This is allowed because the language does not contain any sequences that are identical except for these phones. This rule may be formulated as a declaration that

there is no need to distinguish phonemes if the distinction is always carried also by the surrounding phonemes. Through a discovery of such complementary distributions among the lists of phonemes for different positions, the number of phonemes in the master list is reduced.

Upon completion of such an inventory, the prosodic features of the language may be considered. Analysis of the phonetic records in terms of supra-segmental features (additional information superimposed upon the phoneme formation) yields the characteristic durations, accents and intonations of the language.

In the final step, an attempt is made to specify the characteristic groupings of phonemes in the language or the basic sound bundles of language. Many possible sequences do not appear such as having "tl" or "sr" serve as the initial sound of a word. An exhaustive catalogue of the legitimate sequence of phonemes amounts to a description of the phonemic structure of the language.

Further explanation of data reduction under phonemic analysis is described by Miller:

When we say that English talkers use not more than fourteen of fifteen different vowel phonemes, we are simply observing that there are not more than fourteen or fifteen different vowel phonemes that English listeners must differentiate.<sup>3</sup>  
Some linguists say English has as few as seven vowel phonemes.

Here, Miller is speaking in terms of the number of contrasting bits of information needed to distinguish a word unit. He is speaking with the viewpoint of language as a message-carrying communication system. The speaking patterns of the individual are frequently recurring sets of speech wave forms characterized in terms of duration, accent and intonation.

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<sup>3</sup>Miller, p. 23.



When the communications engineer deals with telegraphy, the signal units which are involved are either presented as a fait accompli or are invented by the engineer within certain constraints. When the linguist begins to examine a language, the signal units used in that language must be discovered and decoded by the linguist. Usually, the linguist does not stop with allophones. He groups allophones into phonemes. The noted communication theorists, Shannon and Weaver, view the criteria by which this is accomplished as reflective of information theory:

It is interesting to note...the criteria which lead to the choice of one possible phonemicization over another which can be stated in terms of information theory: he (the linguist) prefers the phonemicization which yields maximum average entropy per signal-unit. The entropy of speech in terms of whatever discrete signal-units may be discovered or set up by the analyst is presumably invariant from one possible valid phonemicization to another, varying only with the rate of articulation. But the entropy per signal-unit is not thus invariant.<sup>4</sup>

An example may be in order. To identify the unaspirated stops of the English words, 'spill', 'still' and 'skill', with the aspirated stops in such words as 'pill', 'till' and 'kill', reduces sound board of signal units. Correspondingly, the signal units have greater freedom of occurrence relative to each other. This is to be preferred over a greater number of units having less freedom. Greater average entropy is implied per signal unit.

It is probable that Zellig Harris has carried phonemic procedures further along this line than anyone. Harris presents distributional analysis in

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<sup>4</sup>Claude Shannon and W. Weaver in Psycholinguistics edited by Sol Saporta (New York: Holt, Rinehart and Winston, 1961), p. 55.

a logico-mathematical construction. His research is restricted to questions of distribution as the freedom with which the different elements occur relative to one another. For the phonic and the morphological elements, he repeats the investigation and in so doing, he "eliminates the meaning of words from his logical elements as B. Bloch and G. Trager had done before him."<sup>5</sup>

The procedure of Harris is purely mechanical. It might be interesting to draw upon this idea of distribution in a series of tagmemic exercises such as a series of rules devised for the appearance of morphemes followed by selection to the proper morpheme which is filled in the slot. For example, "er" is a morpheme which is commonly substituted for the phrase, 'one who does something' and attached to the end of a word. The morpheme has variant spellings such as "oir", "or", "ir", "ur". When attached to a word whose final consonant is voiced and further restricted to be a velar, stopped plosive, the "er" form is chosen. Given this rule of distribution, the student should be able to fill in the blank with the proper letter sequence: "The work \_\_\_ dropped his hat."

For the teacher to conclude, as Harris apparently has, that meaning is to be rigidly translated in terms of mathematical probability occurrences, is to exclude variety in pedagogical approach and to possibly mislead the students into assuming that the rules of co-currence and invariance preceded

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Maurice Leroy, Main Trends in Modern Linguistics translated by Glanville Price (Berkeley and Los Angeles: University of California Press, 1967), p. 80.

the historical development of English when in fact, just the opposite is true. Also, it must be carefully pointed out that if actual language usage should change the occurrence in orderly sequence or some other arrangement affecting the line-up of the phoneme-morpheme schema, the mathematical rules must change accordingly since this system devised by Harris is a mathematical description which triggers phoneme selection rather than a mathematical axiom or prescription.

In contrasting and comparing phonetic and phonemic notation, the phonemic analysis as typified in the Trager-Smith phonemic analysis of English shows a decidedly pronounced similarity between the phonemic encoding of words and the conventional alphabet. The reader may refer to the Appendix for a comparison of the phonetic system of Pyles and the phonemic system of Trager and Smith.

Of course, the ideal writing system in terms of ease in spelling translation would be an alphabetic language in which each letter was directly translatable to the same phoneme with no variation. No known language is so arranged. Certainly, the English language as modernly decoded bears no such smooth linear relationship between phoneme and grapheme.

Yet, the so-called "irregularities" of the English spelling system are not so chaotic and irregular as once thought. With new developments in the refinements of phonemic theory, it is now possible to attempt a series of re-grouping in the presentation of spelling words to be learned so that their

regularities may be more readily discerned and objectively inspected by the student.

Much of the break-through of modern mathematics came as a result of improvement in set theory. It is the purpose of this study to suggest new subdivisions and collating points in order to stimulate further thinking with regard to the untried possibilities of historical and environmental groupings.

In his book, Sound and Spelling in English, Professor Robert A. Hall separates English spelling into three groups of words: the regular, the semi-regular and the downright irregular. He lists forty-seven phonemes, and combinations of phonemes which have regular letter equivalents and concludes that "English orthography does afford to each phoneme of the language at least one regular, clear and consistent alphabetic representation."<sup>6</sup> The semi-regular spellings are irregular in that they symbolize one or two phonemes of a word and even within this ambivalence, these spellings fall into subsets which are consistent within themselves. As Hall states, "the downright irregular are relatively few."<sup>7</sup> He cites as examples of this category, 'quay', 'busy', 'schism', 'who', 'debt' and 'choir'.

Norman Stageberg in his textbook, An Introductory English Grammar presents an inductive exercise to be worked through by the students as a check

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<sup>6</sup>Robert A. Hall, Sound and Spelling in English as quoted in Norman Stageberg, An Introductory Grammar (New York: Holt, Rinehart and Winston, Inc., 1966), p. 38.

<sup>7</sup>Hall, p. 38.

upon Hall's observations. The exercise directs the students to:

Begin with the syllable /m/. Go through the chart of English consonant phonemes...and list all the words you can make by placing single consonants at the beginning of /m/. Write each word in both phonemic notation and in conventional spelling. Then do the same for /t/ and /at/. What correspondence do you find between the consonant phonemes and the letters representing them?<sup>8</sup>

Stageberg comments that "Exercise 32 suggests, within its limited data, that English consonant phonemes have one spelling that may be considered regular and stable. He avers that nearly all consonant phonemes have other spellings. However, within this irregularity are "subsets of words which tend to be regular and consistent within each set."<sup>9</sup>

Stageberg enlarges upon this concept of sub-sets using the phoneme /f/ as an illustration. He points out that thousands of words are examples of regular spellings; that is "f", when the /f/ phoneme is in the initial position of the word. Yet, there is a large sub-set of words in which the initial /f/ is translated by "ph" as in 'physics', 'phenomenon', 'pheasant'. In final position the /f/ phoneme has its regular spelling in words like 'if', 'loaf', 'serf'. The sub-sets, though, yield additional possibilities. The /f/ phoneme is translated as "ff" in such words as 'biff', 'miff', 'off', 'scoff'. This same phoneme is represented as "gh" in 'laugh', 'cough', 'tough', 'rough', 'enough'. There are the less frequent final position spellings of "fe" as in 'knife' and "ph" as in 'epitaph' and "ffe" as in 'giraffe'. For some reason, Stageberg ignores the /f/ phoneme in medial position, translated as "ph" as in

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<sup>8</sup>Hall, p. 38-39.

<sup>9</sup>Hall, p. 38-39.

'elephant'.

In fashioning these sub-sets, Stageberg acknowledges that phoneme translation is affected by the positional order within a word. The categories are not meaning-orientated. Choices for the alphabet encoding of the /f/ phoneme are given in terms of visual frames of reference; for example, the "ff" form is used on such and such words. Stageberg ignores grouping possibilities based upon historical philology or comparative linguistics. The "ph" letter combination has a long and venerable history in the development of languages. The words, 'philosophy', 'phonetics' and 'phonemics' as well as 'morphology' can be traced to the Greek morpheme, "ph". Why, then, should word formations of this lineage be relegated to "irregulars", the very name of which connotes a misshapen form.

Using the Britannica World Language Dictionary as a reference guide, this writer was able to group the afore-mentioned examples of "downright irregular words" into Old English words and foreign-based words. Within the division of foreign-based words, the entries could be further subdivided into particular-language influence.

Two words of the six downright irregulars fall into the category of Old English words. 'Who' is a derivative of the Old English word, 'hw '. It should be observed that the sequence of "hw" is actually the phonetic representation of the modern word-form-"who". Also, the broad "a" of the Old English form is akin to the modern-form pronunciation of 'hwu'. The word, 'busy' can be traced to the Old English forms, 'bysig'. In rapid speech,

it is easy to approximate the modern form, 'busy'. The modern form is most likely an outgrowth of a series of assimilations.

It seems peculiar that educators such as Professor Hall feel that because a word appears within a dictionary of the English language, it is representational specimen of the word formation of that language. This is a particularly hazardous assumption in terms of such a word-borrowing language as English. In a decade in which there is considerable interest in the strengthening of the foreign language programs in the schools, the foreign-language element in the lexicon of our own language is shunted aside as contributing to its "irregularities". Children should not be denied the experience of studying wordform encoding from the point of view of historical development of from the reference point of foreign-language influence as depicted in the remaining four words black-listed by Hall and others. "Quay" is French in origin. Its homophone is "key". The Britannica Dictionary discusses the French spelling "qu" in such words as 'que' and 'qui'.<sup>10</sup> The English word approximate sound is /k/ in such words as 'cat', 'cut' and 'kit'. The dictionary notes that 'choir' is influenced in form by the French, 'choeur' pronounced, 'kuhr'. Since "hr" is a forbidden sequence in English, the />rr/ phonemes seem a reasonable substitute for the French triphthong. 'Schism' is an interesting word which has been traced to the Old French word, 'cisme'; the Late Latin, 'schisma' and the Greek form, 'schizein' meaning a split. The phonetic process of elision in

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<sup>10</sup> Britannica World Language Dictionary, p. 1675.

approximating the form into English will serve as an illustration of attempts to incorporate a foreign word into our language. Perhaps, the spellings of such words inducted into English might be considered as "sound approximations" rather than as "irregulars".

The word, 'debt' is traced to the Latin term, 'debitum'. Although, the passage of time probably accounts for the dropping of the vowel between the /b/ and the /t/ and the passages into oblivion of the "um" ending carried over from Latin, modern English dictionaries still record the intermediate-form word, 'debit'.

To draw the student's attention to permitted sequences within the English language, the teacher might prepare a list of words containing both English words and words from a variety of languages. The students should decide which words sound "foreign" to them. Then, a close examination of the letter sequence within the "foreign-sounding" words as opposed to those decoded as "English-sounding" words should be conducted. An alternate method would be to list the sounds of words permitted within English. The students should be asked to give examples of the sounds as they occur initially, medially and finally within words.

The teacher will find many worthwhile exercises dealing with sound sequencing in Problems in the Origins and Development of the English Language written by John Algeo and Thomas Pyles. Examples of exercises to be found in this book are:

1. Some combinations are rare or recent in English such as the "pw" sound used in some pronunciations of 'puissant' or the "bw" sound of 'bwana'. Four quite recent consonant sequences begin with the initial sound of ship. Can you supply words to illustrate them?



2. Dictionaries often record sequences that are seldom heard because they violate the system of English. What dictionary pronunciation do you find for the initial consonants of 'phthisis', 'svelte' and 'tmesis'?
3. There are a number of foreign names like 'Mrumliniski', 'Pforzheim' and 'Pskov' that English speakers sometimes make an effort to pronounce properly. Can you think of any other foreign words or names that contain initial consonant sequences not permitted by the habits of English?<sup>11</sup>

The teacher could use more creativity in grouping words so that the words can form a spelling-pattern "set" even though the actual words within the groups may be few in number. Frequency of entry does not diminish the importance of the class. Frequency of occurrence of the word within the language should be taken into consideration. Even though Hall lists 'who' as "downright irregular" and the SRA Reading Program lists the word as "exceptional",<sup>12</sup> in terms of frequency of usage, 'who' is a regularly-appearing word.

The complex theory of phonemic distribution can be applied to language arts study both in the elementary and secondary school. It is up to the teacher to translate the theory into learning exercises appropriate for her grade level. Florence Shakman has designed an interesting exercise geared towards the middle grades. This creative teacher is able to weave into the exercise the concept of initial, medial and final positioning as well as

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<sup>11</sup> John Algeo and Thomas Pyles, Problems in the Origins and Development of the English Language (New York: Harcourt, Brace & World, 1966), p. 5.

<sup>12</sup>

SRA Reading Program: Content Analysis and Scope and Sequence of Skills (Chicago: Science Research Associates, 1967), p. 11.

providing for a duplication, albeit on a small scale, of the distributional analysis techniques advocated by Harris and others. To motivate the children for the exercise, the teacher should discuss how words may look alike but have different sounds and how words may look different but have the same sound. Then, the teacher directs the students to:

1. Find the two words in each group of three words that have the "ow" sound: "how, show, shout"; "town, bound, thought" and "owl, shook, cowl".
2. Look at the words on the board. The words are: house, down, round, how, sound, town, cow, now. How are they alike? How are they different?
3. Look at this list of words: bow, bought, mouse, now, brought, crowd, house. The teacher should elicit that three columns are needed. How should the words be grouped into the three columns?
4. Change these words to make new words with the "ow" sound: 'no' becomes 'now'; 'hoe' becomes 'how', etc.<sup>13</sup>

In class discussions of how oral patterns of words are encoded within the written alphabetic symbols of spelling, the teacher should be aware that dialectal differences in the spoken language may interfere with a particular student's perception of the phoneme-grapheme correspondence. Robert Hall suggests that the language-arts teacher have adequate training in phonology and further, that the teacher have enough knowledge of the local dialect of the learners, "where this differs from the standard in order to give them as many helpful hints as possible..."<sup>14</sup>

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<sup>13</sup> Florence Shankman, "Linguistics and Word Study", The Instructor, LXXVIII (December, 1968), p. 52.

<sup>14</sup> Robert A. Hall, Introductory Linguistics (Philadelphia: Chilton Books, 1964), p. 434.

Mildred Bailey in her article, "The Utility of Phonic Generalizations in Grades One Through Six," recommended that the teacher explore the effects of dialectal variation upon the written code of spelling. She gives this example:

If "er" is a common dialectal substitute for "oi", then the explanation of the visual "oi" correspondence to the pronounced "er" along with a list of common "oi" words should serve towards a consistent spelling translation of this particular sound combination."<sup>15</sup>

Other types of spelling errors which closely hinge upon standard pronunciation as a clue to the spelling are replacement of sounds such as orally encoding /lɛnθ/ for 'length'; interchanging sounds such as /holt/ for 'hold'; transposition of sounds as in /pɪskrɪb/ for 'prescribe' and the insertion of extra letters such as pronouncing the word, 'film' as /fɪlɛm/. David Patton emphasizes these remedies for improving visual and auditory word form impressions:

The student should visualize each letter in the word, perhaps tracing the individual letters would be helpful. Pupils should break the words into syllables. The teacher should pronounce each word accurately upon initial presentation. The words should be pronounced in concert with the class. The teacher should listen for inaccurate pronunciation and check individual pupils for doubtful enunciation. The teacher should have pupils repeat several times the part of the word which is difficult to enunciate.<sup>16</sup>

Richard Hodges feels that the sound-to-letter principle can be presented to greater advantage if the history of orthography is used as a spelling tool.

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<sup>15</sup> Mildred H. Baily, "The Utility of Phonic Generalizations in Grades One Through Six", The Reading Teacher, XX (February, 1967), p. 417.

<sup>16</sup> David Patton, "How to Correct Spelling Errors", in Verna Dieckman Anderson, et. al. Readings in the Language Arts, (New York: Macmillan Co., 1964), p. 217.

Many of our exceptional spellings can be explained historically. Many modern words contain "silent letters" which were sounded at an earlier period in history. The letter "k" appearing at the beginning of words such as 'knee', 'knock', 'know' and 'knight' represent a time in history in which these words were pronounced with an initial /k/ sound. Thus, the letter "k" is vestigial, remaining long after the disappearance of the sound formerly signalled by its presence. Hodges asserts that "such background information can help pupils appreciate the rich and fascinating history of our language as well as understand the reasons for the spelling of some unusual words."<sup>17</sup>

One method of research to uncover sources of our present-day vocabulary is to compile individual word biographies. Through a compilation and comparison of word biographies for such words as 'derrick', 'boycott', 'assassin', 'panic' and 'cereal' will illustrate some of the ways that word meanings change.

Carolyn Pierce, in her article, "Lexicology in the Senior High School", neatly summarizes major approaches to the study of word coinage.<sup>18</sup> The following table is based upon this study:

<u>Neologisms</u>	<u>Sample Words</u>
idiomatic compounds	egghead, brainwash
Greek and Latin	
combining forms	philosophy, adjourn
derivatives	deplane, eighthish

<sup>17</sup>Richard E. Hodges, "How Is Spelling Influenced by the Structure and History of American English", Timely Topics Newsletter, III (November-December, 1967), 1.

<sup>18</sup>Carolyn Pierce, "Lexicology in the Senior High School", Illinois English Bulletin, LVI (October, 1968), 13-17.

Neologisms

semantic change words  
 self-explaining compounds  
 acronyms  
 blends  
 functional change words  
 pure root creations  
 shortenings or clipped  
     words  
 reduplications  
 echoisms  
 back formations  
 sound symbolism

Sample Words

bakini, mackintech, bug  
 supermarket, ball point pen  
 VIP, Benelux, snafu  
 motel, smog, beatnik  
 missiled, book  
 coinages, Kodak, dacron  
 phone, bus, still, flu  
 pooh-pooh, chit-chat razzle-dazzle  
 ack-ack, tom-tom, bang-bang  
 baby sit, grocery shop  
 nightie, snore

The students can add examples to those provided. Such an exercise may also result in the coining of new terms by the students.

An entire lesson could be set aside to illustrate the phonetic assimilation which has resulted in the many grapheme encodings of the originally formed "ad". This two-letter morphemic combination has added immeasurably to our word stock. Having the students explore "ad" and its assimilated variants, "af", "al", "an", "ar" and "as", etc., gives them experience with morphemes and word building while exposing them to a myriad of new words. This exercise should help to convince them that our spelling system is related to our sound system.

New words are added to our word stock when new situations arise within our physical environment which cannot adequately be described within the current lexical stock. To illustrate processes of word coinage such as depicted in the above table, the teacher may focus on new terms wrought by the "space race". Although a great many new terms have arisen in the "space age", some words are not new words but rather, they are words whose meaning has been extended. The students, upon inspecting a number of terms, should differentiate between these coined and those adapted from another context.

The processes involved in the coining of the new words could be identified. Examples of sample words would be: 'life-support systems', 'module', 'A.O.K.', 'splash-down', 'launch pad', 'having a go', 'mission control', 'gantry' and 'spacecraft'.

The teacher may wish to approach word formation through concentrating upon one particular process. The process termed, "back-formation," is rather straight-forward and relatively simple to understand. "If someone should ask you, "What does a feeper do?" you would probably answer, "He feeeps, of course." You would answer thus because there exist in your mind such word-pairs as 'tell-teller'....and you would reason, perhaps unconsciously, that on the analogy of these forms the word 'feeper' must have a parallel verb 'feep'."<sup>19</sup> Thus, the back-formed word is formed from a word that looks like its derivative. For example, 'team-teach' was formed from the noun 'team-teacher'. In addition to citing back-formation verbs to which the student must respond with the noun from which they were formed, Stageberg includes this exercise:

1. The noun 'greed' is a back-formation from the adjective 'greedy'. Write four pairs of words that constitute an analogy for the creation of 'greed'.
2. In common use in English are the pairs 'revise-revision' and 'supervise-supervision'. From this analogy what verb is back-formed from 'television'.
3. English has many pairs on the pattern of 'create-creation', 'separate-separation', and 'deviate-deviation'. On this analogy what back-formation would you expect from 'donation' and 'oration' \_\_\_\_\_ and \_\_\_\_\_?<sup>20</sup>

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<sup>19</sup>Stageberg, p. 152.

<sup>20</sup>Stageberg, p. 152.

A consideration of words as reflected within their original environment can also be used as a showcase for many of the words whose particular spelling patterns have become outmoded in terms of the encoding forms used in present-day spelling. These terms can be rescued from the limbo of "irregular" word status by displaying them within their regularly-patterned sets dictated by an earlier period of history. A re-creation of the environment which gave rise to these terms will provide an interesting method of presentation. Words will be seen not as isolate forms but as units of message exchange within a particular setting.

I have coined the term "frozen in usage" to express the status of many irregular words which at one time were regularly-formed entries within an entire set of items. As the individual items within the spelling pattern became obsolete and were dropped as units of reference, the remaining items became relics of the formation patterns of a by-gone age. For instance, in Camelot, knights still knock upon doors, joust occasionally and thwart all foes. With the phased-out retirement of knights, the relative infrequency of their appearance except in certain honorary fraternities, gave no impetus to the modernization of spelling which would have resulted in a dropping of the initial "k" to conform to its modern homophone, 'night' which in fact, some writers have modernized to 'nite'. Perhaps, retaining the old form, 'knight' as the "knights of Columbus" have, serves as a symbolic reference to the ideals of old.

In the past, farming implements had contributed heavily to our word stock. As our country moved from its agrarian heritage, reference to various terms encountered within the agrarian environment, became quite infrequent. Being

a conservative lot, farmers had no impulse to change a 'sow' to a 'so' in the interests of spelling simplicity or a 'hoe' to a 'ho'. The 'plough' in time was often spelled , 'plow' but the 'feeder' remained a 'feeder' only to be replaced by the 'combine'. The 'sicol' in Old English had become a 'sikel' by the Middle Period and is destined to remain forever a 'sickle' since modern equipment has all but relegated this tool to antique status.

Thus, some words are dropped entirely from our vocabulary because their referents are no longer important or they are replaced by words culled from a later environment. Some words, which signal items enjoying timeless popularity, have a continual face-lifting to conform to advancing systems of spelling-pattern encoding. Then, there are those other words which to some people seem troublesome because their spelling form has been "frozen" in the form dictated by a time long gone by. They are not used with such frequency as to demand an overhaul in spelling form nor are they used with such infrequency that they can simply be discarded.

Complementary distribution and morphological formation is pertinent to the examination of changes in spelling encoding attendant upon a change in the word's grammatical function. In An Introductory English Grammar, Norman Stageberg discusses phonological and morphological conditioning referring to the distribution being conditioned by the environment or the neighboring sounds. For instance, "the plural morpheme "-s" has further allomorphs, as shown by the /-In/ of ox-oxen and by the /O/ (zero suffix) of sheep-sheep.<sup>21</sup> This observation represents a classics mixing of visual and auditory clues for,

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<sup>21</sup>Stageberg, p. 102.



if the morpheme of 'oxen' is "en" not "in"- the "in" is the phonological code of the written "en" which is required when the word "ox" is pluralized. The written symbol " " is a visual clue indicating that there is no rewriting required to change the singular form into the plural form, such as applied to the word, 'sheep'. In terms of auditory processing, no such clue is necessary since the auditory signal is one and the same for each form.

In further commentary, Stageberg asserts:

These two /In/ and /ø/ are in complementary distribution with all the others in that they stay in their own territory, associate only with specific words, and do not overlap in positions in which they occur; that is, the words they attach themselves to, have nothing to do with their phonological environment. Instead, the use of /In/ as the plural of 'ox' simply takes /In/ and that's that. Likewise, the occurrence of the plural /ø/ allomorph in a few words- swine, deer, sheep, trout, pike, quail, grouse, and others- is determined by the fact that these special morphemes require a /ø/ plural. When we can describe the environment that requires a certain allomorph only by identifying specific morphemes, we say that the selection of allomorphs is morphologically conditioned.<sup>22</sup>

This passage substitutes the phrase, "identifying specific morphemes," for the old-fashioned idea of "memorizing the exceptions." It is indeed odd that Stageberg does not pursue the investigation suggested by his term- "phonological conditioning." Although he maintains that phonemes are the smallest segments of speech sounds, he gives no credence to this belief in the above discussions.

Judging from these remarks made by Stageberg, we deduce that the basic unit of environment is the word. The word, however, is a lexical unit, not a

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<sup>22</sup>Stageberg, p. 102.

morphological unit. It should be noted that Stageberg shows minimal contrast or covariance factors within the limitations and scope of word segments. He uses lexical contrast to prove his theory of morphological conditioning and "contrastive distribution." This type of contrastive distribution is superficial-being geared only to a visual contrast occasioned by a difference of one printed letter in the endings of two printed words of similar shaping.

If we are to take seriously his reflection on phonological conditioning, we should compare and contrast the articulatory contrasts elicited through the phonation of "oxs" and "oxen". The focal point within the contrastive environment is not perceived word for word but occurs in one articulation bit which requires a phoneme transition; that is, between a plosive and silibant as opposed to a plosive and vowel phoneme. Keeping in mind an earlier observation made as to the consonant-vowel-consonant noise sequencing of English words, it seems consistent within this language patterning to choose to phonate "en" rather than "ks".

Also, the duration of the lexical unit is affected in choosing "en" over "ks". The "e" sound, being that it is a vowel, sustains the last syllable of the word, thus preserving within oral transmission, the distinction between a single beast and two or more beasts by virtue of stress and elongation signals. A muffled "ks", on the other hand, cannot be audibly distinguished from "ksz" which would be the phonological encoding of "oxes".

The following exercise should help to demonstrate the phonological considerations inherent in the choice of one form of ending over another form. The student should articulate each sentence, repeating each sentence

with the encoded form "oxes" and then, with the encoded form "oxen".

The ox\_\_\_\_\_ are in the field.

Ox\_\_\_\_\_ carts were used by the pioneers.

Carts pulled by ox\_\_\_\_\_ were common long ago.

The phonological transition points are more telling as environmental conditioners than are the morphemes used in a particular instance.

Some linguists have observed that a normal person can say and understand words and sentences that he has never said or heard before. Both linguists and teachers have tried to explain this creative ability. They have wondered about certain mistakes children make such as using the forms 'gotted' and 'brang'. Or, why does a child read, 'big' as 'pig' or 'fox' as 'box'?

Possible answers to such questions are supplied by a theory of language learning proposed by linguist Noam Chomsky and his disciples, in the form of a transformation theory. Chomsky has suggested in his writings that when children perceive spoken words, they unconsciously formulate theories dealing with the sounds, meanings and syntax of language. According to Justin Fishbein, "This explains why a child can say something he was not taught to say..... 'ring' to 'rang', 'bring' to 'brang'."<sup>23</sup>

One aspect of the learning theory put forth by psychologist, Jean Piaget, is much the same. He feels that a child perceives certain physical features in his environment whereupon he proceeds to group them and then, to contrast

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<sup>23</sup>Justin Fishbein, "Reading and Linguistics", The Instructor, LXXVII (November, 1967), 25.

one grouping with another. For example, the word 'dog' may be extended to any animal having a head, tail and four legs. Finer discriminations are afforded with more experience and increased observational powers.

In the act of reading, perhaps in the same way, the child recognizes 'pig' by its general shape and the dot placed over the "i". He may read 'big' for 'pig' because the visual discrimination set is too broad to encompass the finer sub-distinctions required to distinguish between this minimally-contrasting pair of words. In view of this, many authorities would concur with the statements of Fishbein:

Linguistics helps us identify the distinctive features of spoken and written language. You hear 'man' and 'Dan'. Though they sound similar in some ways, in one way they sound different. The difference helps you distinguish the meaning of one word from the other. The written forms-which represent the spoken forms-also differ from one another in one way: 'man' begins with an "m" and 'Dan' begins with a "D". The letters of the alphabet distinguish one word from another in the same way that head shapes distinguish the dog from the cat. So the first step in a linguistic reading program is to teach the child the names and shapes of letters of the alphabet.<sup>24</sup>

The next step in the Science Research Associate's reading program which Fishbein represents would be to have the teacher present the words to be read in vertical lists. The words in this stage of presentation are minimally contrasting words such as 'man', 'Dan', 'fan', 'can'. Children are asked to spell the words and then are told what the word form represents. They are

asked, by way of follow-up, to read the words as whole words.

Leonard Bloomfield, the pioneer in adapting linguistics to reading instruction, and Clarence Barnhart offer a method of teaching reading whose central thesis is that an inseparable relationship exists between the words as printed and the sounds for which the letters are conventional signs and that to learn to translate letters into meaningful units requires from the start a concentration upon letter and sound to bring about as rapidly as possible an automatic association between them. In commenting upon the Bloomfield methodology, Robert Pooley states:

The basic procedure of the method... is to concentrate upon establishing patterns of letters and sounds regardless of meaning, to provide the child with a constantly growing set of sound-letter constants by means of which he converts letters to sounds and almost automatically converts sounds to meaningful words.<sup>25</sup>

In the introduction to Let's Read, Bloomfield diassociates himself from the phonic school for a number of reasons, one of which is extremely important in discussing sound grouping and reading. Bloomfield states that "The second error of the phonic methods is that of isolating speech sounds..."<sup>26</sup> He explains that although phonetics can be utilized within a reading program, beginning readers are likely to become confused by the many signs in phonetics

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<sup>25</sup> Robert Pooley in his "introduction" to Let's Read: A Linguistic Approach (Detroit: Wayne State University Press, 1961), p. 6.

<sup>26</sup> Leonard Bloomfield in his "Introduction" to Let's Read, p. 28.

which do not appear in the ordinary printed words which the children encounter in their reading. He felt that phonemics would prove a key or tool in unlocking new words.

To Bloomfield, the most serious drawback of the reading instruction as encased within the word method was the obfuscation of the alphabetic principle due to the order of word-form presentation inherent in the method. Bloomfield urged that "we must train the child to respond vocally to the sight of letters and this can be done by presenting regular spellings and by presenting systematically the various types of irregular spelling."<sup>27</sup>

Bloomfield comments upon the left-to-right presentation involved in the decoding of visual printed signs and draws a similarity to the order of spoken sounds spoken sounds and forms. He states:

...the letters are arranged from left to right in a succession that corresponds to the succession in time of the corresponding phonemes (p-i-n corresponding to the spoken sound of the word pin) and the words, also, are arranged from left to right in a succession that corresponds to the succession in time of the spoken words: "Give me a pin."<sup>28</sup>

The traditional "looksay" or "sight-word" method of reading ignores the relationship between English spelling and pronunciation and presents whole words as symbols which must be learned as unrelated entities much as words are learned in Chinese. Thus, there are no parts of one word which can be related to similar parts of another word in a systematic way. "The reader essentially has to react to the different configurations of a string of

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<sup>27</sup>Bloomfield, p. 29-30.

<sup>28</sup>  
Bloomfield, p. 35.

separate words."<sup>29</sup>

An almost opposite approach is represented by "phonics" which emphasizes the relationship of alphabetic letters to isolated spoken sounds. "While symbol-sound correspondences are studied in detail, neither syllables nor whole words are taken up in any kind of meaningful sequence."<sup>30</sup> The Initial Teaching Alphabet has devised its own consistent alphabet so that symbol and sound have a one-to-one correspondence. Basically, the ITA is a phonic system which does not take up syllables or words in any particular order.

Bloomfield does not see our English spellings as chaotic but recognizes inconsistencies. He feels that our alphabet is essentially one wherein symbols do represent sounds and that, to teach a child to read, we must help him make correlations between symbols and sounds as they exist in syllables and words.

According to this viewpoint, a reading program must consist of a series of developmental texts based on the principle of graded selections of syllables and words in terms of their difficulty or irregularity of correspondence between grapheme and phoneme. Carefully structured "families" of words including nonsense syllables are presented. Emphasis is placed on minimal contrasts in spelling and sound. Thus, the "an" family of 'can', 'pan' and 'ran' including nonsense syllables such as 'gan', 'lan' and 'san'. Next,

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<sup>29</sup>R. C. Simonini, "Bloomfield-Based Beginning Reading Program", "Let's Read", No. 7 (April, 1967), pg. 3.

<sup>30</sup>Simonini, pg. 3.

consonant blends in initial and final positions are introduced such in 'span' and 'cran'.

In similar step-by-step progression, the regular spelling patterns of the language are covered until the reader has developed a set of techniques for decoding the language. The SRA Basic Reading Series of 1965 departs from the Bloomfield system to the extent of using some "exceptional words" at the beginning of the program. The Merrill Linguistic Readers of 1966 are also based upon Bloomfield's system with some modifications by the linguist, Charles C. Fries, for the purpose of developing a sense of grammatical meaning through experience with sentence patterns and intonation. Fries contends that structural linguistics does not confine itself to the bundles of contrastive sound features that in special sequences identify the word patterns of our language. He declares that "Knowing at least some of the thousands of words that a language uses constitutes only one of the essentials of communications."<sup>31</sup>

In this decade, exponents of linguistic approaches to the teaching of reading have tended to view the act of reading as one communicative process within the closely integrated language arts program. The central theme of Carl Lefevre's influential book, Linguistics and the Teaching of Reading, is that reading is essentially a language process and any language process may

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Charles C. Fries, Linguistics and Reading (New York: Holt, Rinehart and Winston, 1963), p. 68.



best be studied integrally. He considers auding and speaking to be audio-lingual processes whereas reading and writing are thought to be manual-visual or the sending and receiving operations of communication "graphics". To him, the language arts operations form part of a vast communications network. He expresses the thought in this manner:

All four activities are integrally related processes of the total complex language system. They may be analyzed and studied quite apart from the messages sent and received. This is not to deny the importance of the messages or meanings; on the contrary, the only reason for mastering the language system is to gain ready and easy access to the universe of thought.<sup>32</sup>

There is a slight ambiguity in his categorization with regard to "oral reading". In this complex act, the reader must first, decode the writing of someone else and then, while orally transmitting the words he has decoded, the oral reader must superimpose the suprasegmentals such as pitch and intonation to suggest the oral reader's own interpretation of the printed words. In this thesis, a special chapter has been devoted to intonational patterns in view of the two-stage decoding and encoding involved.

Robert Pooley, in his introduction to Let's Read, encouraged a widening viewpoint with regard to the act of reading. He urged exploration of:

1. A system of reading which combines the resources of eye and ear in units of sight and sound as basic elements of learning.
2. A system in which every new step is not the learning of isolated words, but enlargement of the power to identify words from patterns of letters.
3. A system in which the translation of letters into sounds and sounds into meaning becomes increasingly automatic.<sup>33</sup>

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<sup>32</sup>Carl A. Lefevre, Linguistics and the Teaching of Reading (New York: McGraw-Hill Book Co., 1964), p. 196.

<sup>33</sup>Robert Pooley in Let's Read, p. 7.

This concept is aptly expressed by Charles Fries in his definition of reading:

The process of learning to read in one's native language is the process of transfer from the auditory signs for language signals, which the child has already learned, to the new visual signs for the same signals... Learning to read means developing a considerable range of habitual responses to a specific set of patterns of graphic shapes.<sup>34</sup>

The writer is in sympathy with efforts to treat reading as a decoding skill within communication. Not enough effort has been made to ascertain and to develop "a considerable range of habitual responses." Bloomfield's sentence proto-types, if used exclusively, render reading devoid of context and generally devoid of meaning. For instance, it is difficult to imagine a respectable six-year old engaging his friends in the following conversation depicted in Let's Read:

Liz got a big red wig.  
Liz had it on.  
Did it fit? Did it tip?  
Yes, it did tip. It did not fit Liz.  
Can Lon get it on? Let Lon get in on!  
Lon got it on. Lon did a jig.  
Lon did a jig in a wig!<sup>35</sup>

This is a typical reading lesson despite the general agreement among linguists that a child has learned the basic elements of his language by the age of six or seven and despite Bloomfield's own words directed to the teacher: "As a matter of fact, nearly all six-year old children have long ago learned to speak their native language...."<sup>36</sup>

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<sup>34</sup>Charles Fries, p. 120-121.

<sup>35</sup>Leonard Bloomfield, Let's Read, p. 100.

<sup>36</sup>Bloomfield, p. 27.

Recently, the Illinois Department of Public Instruction prepared a manual, Linguistics and its Relationship to Language Arts, which offers suggestions concerning the linguistic approach to sound-sight correlation in beginning reading programs. The teacher is urged to pronounce the words for the reading lesson in everyday, normal speech patterns. The teacher is to build confidence by developing the child's ability to move freely back and forth between the written and oral language. The manual suggests that vocabulary should be introduced inductively. The child should be expected to discover the relationship between the letter and the speech sound thus, "automatically establishing patterns of letter-sounds that convert into meaningful words."<sup>37</sup>

As the child progresses through the grades, the variety and number of lexical signs will gradually increase. During the beginning stage which Fries calls "the transfer stage", the main task of the pupil should be to "respond rapidly to the patterns of graphic shapes and the correlating portions of the language signals they represent."<sup>38</sup> There is a need during this stage. to limit vocabulary to words within the child's environmental experience.

The first stage of reading, therefore, should be directed to establishing habitual responses to the identification of each alphabet letter. Beginner's books should feature structural clues to identify individual letters and

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Estelle Bradly and Janet Lerner, Linguistics and Its Relationship to the Language Arts, (Springfield: Office of the Superintendent of Public Instruction, 1969), p. 10.

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Fries, p. 120.

further, to extend visual and auditory discrimination to the letters as they sound and as they appear within words. Visual discrimination exercises involve matching identical letters within a column or choosing a letter from a series of letters which matches the illustrated letter. The closure presentations of letters can also be utilized; that is, the letter is presented through a series of broken lines which the child must visually perceive as a whole letter. Troublesome letters in words can be underlined or written next to the word.

Kinesthetic clues can be combined with visual decoding. For instance, the child can trace the letters or can draw them on specially-lined paper so that their top, middle and bottom parts can be accurately delineated. The teacher might have the students cover the upper or lower portion of the printed sentences or words in the reader and ask the students to determine from these minimal clues, the identity of the letter. The children can be asked to trace the letter shapes in the air or on the floor with their arms and legs. The teacher might make up a large set of alphabet letters having a surface which promotes tactile identification such as sandpaper or felt.

After the children are relatively sure of the isolate letters, the teacher guides them in an exploration of letters as they appear in words. Since many of the letters stand for more than one sound in various word contexts, the teacher must reinforce the letter-to-sound correspondence as modulated within the word environment. Each child might keep a scrapbook indexed alphabetically. He must find pictures which illustrate different sounds of the same letter. The students can exchange scrapbooks to see if they can correctly encode

orally, the word sounds represented by the pictures.

When the children are ready to begin reading sentences, the reading lessons should be communication experiences in visual and auditory decoding as well as in oral encoding. The beginner's book in the Reading Essentials Series published by the Steck-Vaughn Company, Come and Play, contains a short story consisting entirely of dialogue. The teacher is to write upon the board those words which are new to the children. The words should be written both in small letter and capital letter form. Then, the teacher is directed to: "Let the children look at the story and read it silently. In reading orally let one child read what Betty said. Let one read what Father said..."<sup>39</sup>

Whole-pattern recognition is encouraged by means of the teacher's calling out of a sentence for the children to find in their books. For a similar story within this book, the directions to the teacher read:

Talk about the picture. Ask questions...Let the children read the story silently and try to decide independently what the new words are. After they have read silently, write on the blackboard the new phrases...Give oral reading instructions such as these: Read what Betty said. Read what Bob said.<sup>40</sup>

As the children advance in reading word forms, the method of comparing a given word with similarly-formed words is introduced. Word-rhyming exercises

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Ullin W. Leavell et. al. Come and Play (Austin, Texas: Steck-Vaughn Co., 1955), p. 96.

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Ullin W. Leavell, p. 98.

are particularly important in this regard. The study of inflectional variants of known words and the formation of word derivations by adding prefixes and suffixes should be included at this stage.

"Auditory perception and discrimination must precede visual perception and discrimination... Later, auditory discrimination and visual discrimination become fused and integrated with the skills of structural and phonetic analysis.<sup>41</sup> Exercises in discrimination of minimally-contrasting word pairs develops word attack through enabling the child to associate known sounds with the same letter parts in a new word.

As soon as possible, children should be guided to a natural conversational pattern in their oral reading. "Better understanding of the concept of learning through purposeful activity has resulted in a revision of many former basic methods of teaching children to read orally."<sup>42</sup> The stumbling "star" performance system has been replaced by a conversational reading shared within a natural audience situation. Each selection to be read out loud should be different. The teacher should utilize a check list to record oral reading habits and to list sound combinations and words proving especially difficult. Problems common to the group should be handled in a group situation. Other problems may be handled in a small-group situation or on an individual basis. The ability to pronounce, to syllabicate and to phrase are especially important. For instance, the following exercise designed for the third-grade

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<sup>41</sup>Ullin W. Leavell et. al. Fun Time (Austin, Texas: Steck-Vaughn Co., 1956), p. 4a.

<sup>42</sup>Leavell, p. 4a.

level, illustrates a new approach:

- a. Timmy got a flooper for Christmas. His flooper is red and white, with silver handlebars. All floopers have two wheels. Timmy often rides on his flooper. What word do we use instead of 'flooper'?
- b. In the morning, my mother fixes bonk for me. At noon, I go home to eat my lonk. Most of the time, I have a sandwich for lonk. At night, we all have sonk together. My mother makes good bonks, lonks and sonks.  
What do we say instead of 'bonk', 'lonk' and 'sonk'?<sup>43</sup>

The reader on the level of the middle grades can relate more precisely to environmental influence on word production. Dialectal variation may be taken into account. Phrases peculiar to certain regions may be written and then orally encoded. Recently, a few reading texts have printed words or sentences in dialect as a bit of a contrast to the ubiquitous standard dialect which is free from connotations as to the story's locale. In Values to Learn, a textbook which is geared to the middle grades, a delightful story, "When Gerta Smiled", has for its theme the communicative difficulties Gerta faces in her oral encoding of English. The text's normal word patterning is distorted and the dialectal encoding of the words tells of her plight in that "Ve yoost come from Sveden."<sup>44</sup>

Through the use of dialectal forms, through class questioning and discussion of reading selections, through individual oral interpretation, analysis of words and word patterns can become a creative, inductive approach as well as a deductive process.

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Artha Sue Loy and Mary Grimm, Elementary School English (Menlo Park, California: Addison-Wesley Publishing Co., 1968), p. 15.

<sup>44</sup>V. Clyde Arnsperger, James A. Brill and W. Ray Rucker, Values to Learn (Austin, Texas: Steck-Vaughn Co., 1967), p. 45.

## CHAPTER FOUR

### INTONATION PATTERNS AND TRANSLATION

One of the major features of structural linguistics is its attention to the spoken language with special symbols utilized for the representation of pitch, stress and juncture within the patterns of speech. For too long, children have been trained for visual pattern decoding with little or no concern given to training in auditory patterning. In an article prepared by Robert Pooley for the Sixtieth Yearbook of the National Society for the Study of Education entitled, "Research in English Structure: Structural Linguistics" the author foresees that:

...young children will be taught the patterns of sounds, word forms and word-order which make up simple utterances almost as early as they learn to read such utterances. Children can, and in time will, develop this sort of structural sense. With it the artificialities of traditional grammar will fade out that is, they will identify by ear and eye, patterns of utterance which they will practice and use in speaking and writing.<sup>1</sup>

Thus, Pooley calls attention to groupings and patterns of sound which are as important to encoding and decoding the language as are the visual patterns of the sentence or paragraph.

Teachers of foreign languages preceded teachers of English with respect to the adaptation of patterns of spoken language within their curriculum including practice in listening and other oral-aural procedures which encouraged the student to imitate native spoken language patterns. As early as 1925, members of the Linguistics Society of America in their research on the languages of the American Indians devised techniques which played a leading

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<sup>1</sup>Robert Pooley in Development in and Through Reading, The Sixtieth Yearbook, Part 1 (Chicago: N.S.S.E., 1961), p. 43-44.



role in revamping language instruction after 1939. According to Edmond A. Mèras, these new techniques were based on a belief which originated with Professor Franz Boas and received support from Edward Sapir and Leonard Bloomfield. In essence, the idea was predicated on the observation that written language is seldom a reproduction of actual speech and thus, the only way to learn a language as it is spoken is to imitate as accurately as possible the conversation or speech of natives talking naturally and freely. Mèras summarizes the innovations stressed in this emergent language program:

- 1.) insistence that students spend most of their time in small drill sessions, imitating a native speaker or informant;
- 2.) extension of the language course to fifteen or twenty hours per week;
- 3.) reduction of the study of grammar to what is essential for the intelligent imitation of a native speaker and
- 4.) less emphasis on the study of reading or writing which might interfere with learning the spoken language.

Language, in this perspective, was a system of complex auditory signals, many of which could not be mastered through the study of words in isolation nor through a visual decoding of words in phrases and sentences. Intonational elements are auditory signals.

During the late forties, the success of the Armed Forces Language Institutes brought these methods of structural linguistics into greater prominence. Recently, the widespread introduction of language laboratories has stimulated further experimentation and improvement of these techniques. The tape recorder is not only a study aid, but a new form of textbook as well.

It has become an effective method for drilling students in pronunciation and aural comprehension, for perfecting patterns of speech drill and for furnishing new testing techniques. Marjorie C. Johnston affirms that:

To attain their goals, the linguists insist upon an aural-oral approach- a phonemic analysis of characteristic sounds... followed by phonetic variations of sounds which are caused by their position<sub>3</sub> in a word or sentence when influenced by stress and pitch.

Intonational patterns, including pitch and stress, are commonly thought of as suprasegmental features within the language system which means that the stress patterning of an utterance overlays and reacts with the actual word segments to augment, lessen or negate the meaning conveyed by the word signals.

Intonational patterns are perhaps the subtlest, most automatic and most revealing feature of our encoding system. Within this realm of expression, the shortest exclamation of "Oh", or "Aw" can adequately mirror our emotional appraisal of a particular happening. Through the media of universal feelings which may be expressed by delicate intonational encoding, language barriers may be transcended for the moment. A cry for help or an expression of approval can be conveyed to a decoder who does not share the same language.

As a means of appreciating the intimate relationship between nuances of tone and wording, students should be encouraged to view foreign language films. It may come as a surprise that despite lack of knowledge concerning the particular lexicon of the language, the emotional-attitudinal content comes through clearly.

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Marjorie Johnston as quoted by Edmond Méras, A Language Teacher's Guide, p. 75.

Professional humorists must develop a keen understanding of intonation and duration in order to deliver their lines with such precise timing. The complexity of the suprasegmental level of language may be illustrated by the fact that although actresses and actors are limited to encoding only the words of the author, the vast diversification offered in the portrayals of one and the same theatre role is afforded merely on the intonational and the gesticulatory level. Much of the artful ambiguity within literary works gives rise to a variety of interpretive intonational patterning. Robert Browning's "My Last Dutchess" is a favorite selection for oral interpretation since it may be subjected to a vast array of intonational schema which although consistently maintained within the schema itself, allow a great deal of experimentation with conflicting intonational schema. Depending upon the viewpoint of the interpreter, the poem may show the Dutchess to be alive or to have died from natural causes or to have been put away by her husband. Even within the opening lines, difference in patterning can create a different personality for the Duke who serves as narrator. The lines read: "That's my last Dutchess painted on the wall, Looking as if she were alive."<sup>4</sup> Does the Duke collect dutchesses as might be intimated from a primary stress on "That's" followed by a pause of self-satisfaction and an emphasis on the word, "last"? Or, the

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James Edward Tobin, Victor M. Hamm and William H. Hines, College Book of English Literature (New York: American Book Co., 1949), p.950.

Duke may be inordinately proud as indicated by a stress on "my" and an elongation of the word and also, a stress on the "ess" within "Dutchess" to refer to the Duke without whom there could be no Dutchess.

Although Charles Fries in the following definition of language learning is referring to those students attempting to learn a foreign language, the definition should be applied to students learning their own native language. Fries feels that a person has learned a language when he has, within a limited vocabulary, "mastered the sound system (that is, when he can understand the stream of speech and achieve an understandable production of it) and has made the structural devices (that is, the basic arrangements of utterances) matters of automatic habit."<sup>5</sup> The teacher should remember that he, himself, is indispensable as a model of language usage and should take steps to improve his own language habits. "Your student cannot learn pronunciation from a book .....Give him a reliable model to imitate."<sup>6</sup> One needs to hear a language in order to speak it. Once he has become a speaker of the language he may begin to read it. Writing is the final stage in the acquisition of language. Fries, the founder of the English Language Institute, regards the oral approach as a name "primarily for the end to be attained in the first state of language learning rather than a descriptive limitation of the permissible devices to attain the end."<sup>7</sup> To his way of thinking, the end is the building up a set of habits

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<sup>5</sup>Earl W. Stevick, Helping People Learn English (New York: Abindon Press, 1957), p. 14.

<sup>6</sup>Stevick, p. 18.

<sup>7</sup>Charles C. Fries, Teaching and Learning English as a Foreign Language (Ann Arbor: University of Michigan Press, 1945), p. 8.

for the oral production of language. Many teachers of the English language arts in the last generation or so saw no significance to the oral-aural approach and felt that Fries was a sort of revolutionary.

Even a superficial perusal of current educational periodicals, language arts textbooks and educational methods books will reveal the current emphasis on this approach. James R. Squire has recently noted that "already some teachers of language arts are discovering that pattern practice, reliance on oral-aural drill and the use of language laboratories may support the learning of the English language as readily as they do the study of foreign tongues."<sup>8</sup> The NCTE Task Force language programs for the disadvantaged decry "the lack of planned attention to oral pattern practice, to communicating ideas aloud and to planned experiences in listening."<sup>9</sup> Further, the Task Force admonishes that rigidly structured reading programs, without oral experiences using new vocabulary and sentence patterns will not provide for lasting and continued growth. The Task Force proposed that progress in improving reading and writing instruction would be directly proportional to progress made in the use of oral language. The Commission on the English Curriculum of the NCTE in its work, The English Language Arts in the Secondary School, advocated the approach especially in regard to slow students. "The

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<sup>8</sup>James Squire in Language Programs for the Disadvantaged: Report of the NCTE Task Force on Teaching English to the Disadvantaged (Chicago: NCTE, 1965), p. 209.

<sup>9</sup>  
NCTE, p. 272.

slower a student is, the less reliance should be put on grammatical generalizations... He is likely to profit more from direct teaching and habit formation."<sup>10</sup>

Crystal hits upon the nub of the matter in his statement: "Imitation is the primary norm for language learning...."<sup>11</sup> Imitation is not, in this sense, the mere parroting of words, but rather, an auditory and kinesthetic sifting of the ebb and flow of words within the phrases and sentences of natural dialogue.

If we were to study the natural acquisition of language as it unfolds in the life of an infant, we would observe that initially, the infant is but a decoder of the auditory signals he hears. Then, he makes attempts to reproduce these sounds as he becomes an active participant in his environment. It is more than happenstance that members of the same family have similar intonational patterns. As an interesting exercise, the teacher should ask each student to compare his pitch and tone of voice with that of other family members. More often than not, the male students will imitate the father or older brother while the female student imitates her mother and sisters. One of the reasons for this imitation is the sheer repetitions of the same intonational patterns by members of the family who hold a superior status within the family. Within the family circle, the intonational patterns and vocal nuances of the family become the accepted standard. In some cases, variations from this pattern may be condemned as artificial or insincere or "funny-sounding". In seeking acceptance, the child, either consciously or unconsciously approximates the

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<sup>10</sup> NCTE, The English Language Arts in the Secondary School (New York: Appleton-Century-Crofts, Inc., 1956), p. 132.

<sup>11</sup> David Crystal, Linguistics, Language and Religion (New York: Hawthorn Books, 1965), p. 70.

intonational pattern of his family. This is part of the child's hidden language curriculum. This hidden curriculum is acknowledged in Language Learnings: Kindergarten, Grade 1 and Grade 2. The authors of this book state that:

The opportunity for oral language in the first grade arrives when the first child enters the room. Greeting the child, learning his name, giving directions for the hanging of wraps and selecting a desk all afford immediate opportunities for teacher-pupil communication.<sup>12</sup>

All manner of communication is encouraged between teacher and student.

Justin Fishbein in his statement, "Written language is a code representing the sounds of spoken language...",<sup>13</sup> pays tribute to the primacy of the sounds of spoken language and suggests that procedures for handling written representations of language must build upon the knowledge of the spoken language. Fishbein asserts that the first step in teaching a child to read "is to teach him to break the code-to recognize in printed form the words and sentences that he already uses and understands in speech."<sup>14</sup> The child hears speech in sound units or groupings. Speech is a continuous flow. Thus, procedures which encourage word by word oral decoding of sentences are to be deplored. If the visual is to be separated from the auditory during the decoding process of reading, then the child may come to the notion that these are two separate signaling systems when in fact they are reinforcing agents of one another. The speech act is complex.

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<sup>12</sup>Matilda Bailey, Edna Horrocks and Esther Torreson, Language Learnings: Kindergarten, Grade 1 and Grade 2 (New York: American Book Co., 1956), p. 53.

<sup>13</sup>Fishbein, p. 1.

<sup>14</sup>Fishbein, p. 1.

As a particular passage is read, gestures, clearing of one's throat or certain facial expressions serve as paralinguistic signals which have direct bearing upon the correct translation of the passage. Reading, after all, is the visual representation of the multi-media thought vehicle which we call, "language". To restrict a poem's meaning to ink marks imprinted by cold type fonts is to clip the wings of butterflies. Poetry, as all forms of rich language, exists in the visual, the auditory and kinesthetic decoding which can be summoned from the printed format.

If we have as our philosophical premise that the act of reading is merely a visual skill, then the printers have long ago determined the meaningful units of the sentence to be the word since words are given emphasis and prominence by being set off from one another by islands of white spaces. However, the sophisticated reader easily recognizes that the meaning contained within the conventional sentence frame may be heightened or lessened by a rising or lowering the pitch level during the utterance of the sentence or by means of a primary stress given to syllables within certain words of the sentences or by the vocal underscoring of a phrase within the sentence or by the vocal underscoring of a phrase within the sentence. To read the words, "Go home!" as two equally emphasized words would mean a failure to distinguish subtle shades of meaning which we decode in ordinary speech as an angry directive as opposed to a mild plea. In the drawing out of the full meaning of an utterance, "Linguistic and paralinguistic features of intonation are often difficult to separate."<sup>15</sup>



Lefevre urges that more research is necessary in order to develop:

description of interpretive and dialectal uses of the complex overlay of such vocal qualifiers as overhighness, overloudness, oversoftness, muting, drawling or clipping, rasping, openness or hallowness, breaking or whinnying and singing or whispering<sup>16</sup> as well as systematic variations of pitch, stress or juncture.

The mark of a cultured person is, in the last analysis, largely a function of his intonation pattern. Since this aspect of communication is the most intimate reflection of a person's expression, no student should be denied the opportunity to explore his intonation patterns and to provide for a number of patterns. Students need aural-oral training in order to discriminate among patterns and to select the one deemed appropriate for the particular situation and social climate.

American speech is characterized by a strong rhythm pattern in which stressed syllables alternate more or less regularly with unstressed syllables. The relative difference in force between stressed and unstressed syllables is considerably greater in English than in other languages. This means that in order to speak English in a natural cadence, one's unstressed sounds much have very little stress indeed. The vowel in unstressed syllables is often reduced to a kind of murmur or minimal sound pulse. This is called the neutral or indefinite vowel and by some writers, the schwa vowel. The stress aspect of speech cannot be entirely separated from the factor of vowel resonance.

Much of the current work undertaken by the American linguistic school with regard to the study of intonation can be traced to amplifications made

upon Bloomfield's basic premises and assumptions. In direct opposition to Daniel Jones, who differentiated perceived prominence from stress (force of utterance) and the acoustic correlates of stress, Bloomfield implies that perceived loudness is equateable to stress or to the intensity of the acoustic signal. "Stress- that is, intensity or loudness-consists in greater amplitude of the sound waves."<sup>17</sup> Bloomfield's definition of stress reveals his pre-occupation with objective measurement. Those who agree with Bloomfield tend to treat stress and pitch as independent phenomena. Philip Lieberman objects to this correlation as oversimplified, explaining that stress is also supposed to be "equivalent to perceived loudness and it is clear that the perception of the loudness of a short segment of speech involves its amplitude, duration and fundamental frequency."<sup>18</sup>

However, the system most used as a phonemic analysis of the British English vowels and as the basis for a broad phonemic transcription of the English language had its origins in the theories of Jones wherein length is given phonemic status as a length phoneme. Jones and certain of his followers used to term, "chroneme", as the unit of length phoneme which was symbolized by /:/ . An obvious advantage of using such a symbol consists in economizing on the number of necessary symbols since the /:/ mark can be attached to symbols

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Philip Lieberman, "Intonation, Perception and Language", Research Monograph No. 38 (Cambridge: MIT Press, 1967), p. 180.

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Lieberman, p. 181.

already utilized in the phonemic inventory. Robbins alludes to another advantage. He mentions that the use of this symbol emphasizes the differences of quality and of relative duration. "This system marks the length correlation without suggesting that a long vowel is the equivalent to two short vowels which phonetically it is not."<sup>19</sup>

The controversy concerning whether the stress function should be accorded phonemic stature is on-going. Stress phonemes are usually set up for English phonology. American linguists have set up three degrees of stress as well as absence of stress as four phonemically distinctive elements, symbolized by: ' , ^ , \ , and  According to Robbins, "The phonetic phenomena of stress are very similar between British and American English."<sup>20</sup> The difference in the number of distinctive degrees of stress recognized by Jones and by American linguists is partly accounted for by their different attitude towards the phonological relevance of word boundaries and the boundaries between the elements of compound words.

The pre-eminence of stress in determining both the meaning and the naturalness of what is spoken makes it mandatory that we have symbols to indicate stress in phonetic transcription and that we have some kind of phonemic classification for describing degrees of stress. Without making an attempt to parcel out the various factors which contribute to stress, the IPA and some other phonetic alphabets use a system which may be employed to indicate four degrees of stress.

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<sup>19</sup>R. H. Robbins, p. 135.

<sup>20</sup>Robbins, p. 136.

The first type of stress or primary stress which is the heaviest is used for a monosyllabic word spoken in isolation or for the most important syllable of an important word in context. Secondary stress is a distinctly lesser of emphasis but is still great enough to constitute stressing. The common dictionary custom or convention uses a lighter mark (') following the syllable receiving secondary stress. The IPA symbol is a subscript (<sub>1</sub>) below the line and preceding the syllable.

Tertiary stress is a little difficult to define briefly because this degree of stress entails fine distinctions. Tertiary stress is the amount of emphasis necessary to preserve the normal vowel quality without giving it the attention-getting emphasis of a primary or secondary stress. In general, it is the stress given "unstressed" syllables which are not weakened to the point where the vowel becomes a murmur or a schwa. There is no special mark for tertiary stress in most systems for indicating pronunciation. The dictionary does not find one necessary for the requirements of lexical pronunciation nor is there any such symbol in the IPA notation, possibly because any syllable which is not primary, secondary or weak customarily receives tertiary stress.

Weak stress can be identified quite easily in most cases through its effect on vowel quality, length and pitch. The weak syllables are short, often low in pitch and indefinite in quality. The absence of stress usually leads to a low-central, lax vowel. Thus, almost by definition, the weak syllable is "ə" although "ɹ" and the syllabic consonants, "m", "n" and "l"

also ordinarily appear only in weak syllables, possibly in syllables having "ə" or "ɜ" as the vowel.

In recent years, the study of stress marks and their patterning has come to be practically applied in terms of grammatical analysis. Stageberg asserts that, "Grammatical patterns are accompanied by regular stress patterns."<sup>21</sup> For instance, a compound noun is usually accompanied by the / \ pattern. According to Stageberg, this rule is "exemplified by bluebird, high school, dining room."<sup>22</sup> Would not certain word boundaries adjacent to such compound words offset this pattern such as in the phrase "junior high school". In a phrase such as "dining room chair", "dining room" would not be considered as a compound noun and yet the same stress marks are likely to be retained. Interesting exercises can be developed using stress marks to distinguish visually ambiguous phrases such as "blue blood", "red eye" and "vice chairman".

While stress patterning does have a relationship to grammatical construction, it is misleading to demand that stress mark analysis carry the entire burden of resolving structural ambiguity. For instance, an oft-cited example of stress ambiguity is that of "ice cream" and "I scream". With the exception of "I scream for ice cream", the two phrases would hardly be spoken within the same context.

On the other hand, stress patterning can often be used to conjure up a particular setting. The following exercise illustrates how a single basic sentence can elicit a variety of contexts due to variation within the stress

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<sup>21</sup>

Stageberg, p. 48.

<sup>22</sup>

Stageberg, p. 48.

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pattern. The teacher should describe an environment such as a television director who is choosing short, fat girls for a reducing commercial. He signals those he has chosen with the sentence, "That's an ideal girl." The teacher might ask students to encode the sample sentence as a question or as an expression of disbelief. Even without an explicit suggestion as to context, statements within dialogue form can elicit a context. For instance, sufficient clues to stress patterning are provided in the following snatches of conversation:

That girl is ideal. Yes, ideal.  
That girl is ideal. That's a laugh.  
That girl is ideal. I will consider no other.  
That girl is ideal. Don't you tell me otherwise.

In the book, Sound and Form in Modern Poetry, Harvey Gross suggests that in analyzing poetry, stress patterns other than that of the regular meter stress, serve as a source of diversification and variety as well as provide a richly interwoven structure of studied ambiguity. According to Gross, "The individual word also has characteristic rhythm, depending on its pattern of stress, and individual words may form cross-rhythms with basic metrical structure."<sup>23</sup> He cites the four-line opening of T. S. Elliott's "The Waste Land".

April is the cruellest month, breeding  
Lilacs out of the dead land, mixing  
Memory and desire, stirring<sup>24</sup>  
Dull roots with spring rain.

Using the procedure of matrical analysis commonly known as scansion, we conclude that the words are in trochaic form. The words--'April',

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<sup>23</sup>

Harvey Gross, Sound and Form in Modern Poetry (Ann Arbor: University of Michigan Press, 1965), p. 23.

<sup>24</sup>Gross, p. 23.

'cruellest', 'breeding', 'Lilacs', 'mixing' and 'stirring' are the predominant words in these lines. They create a falling rhythm undergirding the four-stress beat. Gross emphasizes that "...neither meaning nor sound can operate independently. The articulations of sound in temporal sequences, rhythms and meters, present us with aesthetic surface; it is this surface which our perception immediately engages."<sup>25</sup> Further, he describes prosody as aural symbolism. He warns against mistaking the printed encoding and arrangement of the poetic form as the only meaningful or as the most appropriate interpretation of the poem.

Stanzic shape and the general appearance of the poem on the page do contribute to the general rhythmic effect. These visual elements are, however, secondary in the way that the musical score is a guide to the performance of the music. The music of the poem may be found in the fine nuances of sound units which embody a poem. This is the reason why poetry is difficult and well-nigh impossible to translate. The theme may be translated and abstracted; but the poem itself reads as a whole. This accounts for the fact that ballads which have been transmitted by word of mouth can be updated and in the constant retelling can appeal to the modern ear. It would be well to preserve recordings of works which are only existant in their written form since the sound bears truer witness to the mood than does the printed letter. Intonation patterns of the great classical tragedies are preserved in the choral renditions. Intonation patterns of the great operas preserved because they are performed in the original language of the operas can still translate the feelings of

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<sup>25</sup>Gross, p. 23.

mankind even though Greek or Italian is unknown to the audience. Nursery rhymes, children's verses, primitive chants--all appeal through the movement of sound. A poem must sound. "Prosody offers in the basic forms of metrical structure a continuous articulation surface which makes rhythmic cognition possible."<sup>26</sup>

Students should be made aware of the fact that speakers of the English language unconsciously speak in iambic pentameter due to the syllabic and syntactic arrangement of the language structure. The students may check their speaking rate by means of metronome pacing. Despite the fact that a normal speech pattern is not rigidly metrical, the students will perceive a great deal of metrical regularity in their own speech patterns. Furthermore, the students can observe the rhythmical variance created by an individual syndrome of pitch, tempo, stress and other linguistic features. Each decoder of a piece of literature has his own peculiar idiolectal system of intonation. True style is achieved in interpretation of literature when the intonation patterns are reflective of the speaking voice of the oral encoder of the work as well as representative of the general metrical schema.

In English verse, syllable stress establishes the normative convention. Against this convention, poets achieve distinguished prosody. "Mere metrical regularity, of course, does not produce distinctive prosody; it is more apt to produce doggeral."<sup>27</sup> The observation applies in equal measure to the oral

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<sup>26</sup>Gross, p. 23.

<sup>27</sup>  
Gross, p. 7.



encoding of the poem. No reader of poetry can do justice to the oral interpretation of the poem unless he is willing to reach beyond the sing-song artificial meter of the poem. The reader must create his own sense groupings. He must impose his own pattern of pauses, inflections and stresses. Intonation is the creative aspect of language use unfettered by the grammarian's dictum. Wallace Stevens notes:

Croce was not speaking of poetry in particular when he said that language is perpetual creation. It is not only that the imagination adheres to reality, but, also, that reality adheres to the imagination and that the interdependence is essential. The deepening need for words to express our thoughts and feelings which ...are all the truth that we shall ever experience, having no illusions, makes us listen to words when we hear them, loving them and feeling them, makes us search the sound of them, for a finality, a perfection, an unalterable vibration.<sup>28</sup>

Pitch levels and terminals are an outgrowth of the study of dialectology. Most systems of demarcating intonation contours are similar. The systems share the difficulty of being inadequate to the task of using visual symbols to envelope the almost infinite nuances within an individual voice and further, among the voices of various individuals.

Generally, the distinctions in pitch are listed as "extra-high", "high", "normal" and low. No definition of these levels has been attempted. The levels are merely accorded relative status. The low pitch is assigned the first level and may be indicated simply as (1). The normal voice pitch is considered to be level two or (2). A slightly higher pitch is considered high or (3) and an unusually high pitch is rated as (4). In his explanation

of this pitch code, Norman Stageberg states, "The normal pitch of your speaking voice, whatever its actual height, is called level 2 and from this you make departures upward and downward."<sup>29</sup>

This system is more useful as a class exercise than as a precise delineator of pitch. In order for speakers to use pitch to their advantage, they must have some idea and their natural pitch. Under the teacher's guidance, each pupil should have the experience of having the class respond to his voice in terms of the four-dimensional pitch classification. Obviously, the teacher should take into consideration the sex and age of the pupil in directing him toward optimal pitch level. Vocal variety and voice flexibility can be encouraged through presenting the class with various short sentences coded with respect to pitch level variation. For example, the teacher may write this sentence upon the board: "I'm<sup>2</sup> going home<sup>3 1</sup>". Students should take turns trying to vocally duplicate the suggested pattern.

Variety can be introduced through engaging members of the class in a quick exchange of dialogue. Singling out a class member, the teacher can intone a flat statement such as "You're not going home" to which the pupil intones a response, "I want to go home". The teacher may then become more insistent in her statement, "You're not going home" to which the student replies with additional stress patterning, "I want to go home" and so on. The teacher can create a variety of situations. The class audience should observe the wide variety of personalized reactions that can be elicited in

repetitions of the same phrase. The students should conclude that the tonal value of communication resides not in the word alone but waltzes deftly in and about the phonemes, morphemes and supersegmentals.

Pauses, pitches, terminals and junctures are auditory signals to aid in the production of the speech melody suggested by the printed words. A useful method of presenting punctuation marks as signalers of meaning rather than as obstacles to receiving a passing grade on a composition is to associate the marks with the timing segments of spoken English. For instance, the (#) mark is indicative of a "This is final" statement. A double bar // indicates either a complete thought or the end of an important segment of a complex thought. A single bar (/) indicates the slight pause--perhaps a change in the direction of the thought while a dash indicates all but imperceptible lingering. Lefevre conceives of a sentence as an auditory unit rather than as a chain of words ended with a visual period mark. He states that, "Primarily, English utterances are understood as sentences because they end with one of the end-signalling patterns, not because of their word order or the particular words within larger patterns."<sup>30</sup> What a world is foretold in our everyday 'yes-no' dichotomized signaling. The four-letter word, "well" becomes a heavy sentence for those awaiting announcement of the outcome of a 'yes-no' decision. Ask a child in the primary grades to demonstrate the number of different sentences his mother composes within tonal variations upon the child's first name.

The simple device of clapping can be used to accent basic language patterns and conventions. Carl Bereiter and Siegfried Engelman offer this

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<sup>30</sup> Lefevre, p. 52.

suggestions:

The teacher can help the child become aware of the critical element and locate it by phrasing the sentence rhythmically and clapping as she says the critical word. The clap functions as an accent that helps place the element more dramatically.<sup>31</sup>

The authors also suggest liberal use of questions to call the child's attention to specific parts of a sentence or process and thus, help to define them.

This technique is based upon the underlying concept in language structure analysis that sentences and large units are built around phrases. In the natural acquisition of language, the child increases his vocabulary by filling in with new words, the slots left vacant within an old, familiar phrase. For instance, the blank in "Where is the \_\_\_\_\_" is to be filled in by the noun function. Or the infinitely open-ended modifiers attached to the basic stem, "So-and-so is \_\_\_\_\_" provides a pattern drill. In such exercises, the map of language structure remains essentially the same, only the elevated points are distinct. The patterning of the language lesson format must be capable of standing for reality. It must be able to create a verbalized description of reality which may be treated as if it were reality. Language teaching must be so structured that a person familiar with language is "able to perform many of the same operations with a physical presentation and a language presentation."<sup>32</sup> In other words, the child must learn about the substitution property of language. Stageberg presents an interesting exercise correlating

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Carl Bereiter and Siegfried Engelmann, Teaching Disadvantaged Children in the Preschool (Englewood Cliffs: Prentice-Hall, 1966), p. 115.

<sup>32</sup>Bereiter and Engelman, p. 124.

word position and syntactical relationship with primary word stress. He asks the student to compare the following utterances:

Is the library in your college quite large? (Normal stress)  
 Is the LIBRARY in your college quite large?  
 Is the library in YOUR college quite large?<sup>33</sup>  
 Is the library in your college QUITE large?<sup>33</sup>

In her article entitled, "From Language to Linguistic Criticism", Sally Issacs suggests that after the students discuss the surface meaning of a poem, they must be led to a close linguistic analysis of the poem. The initial activity would entail marking of the poem for stress, pitch and juncture. Next, she urges a tagmemic method of substitution slot-filling. Issacs selects the poem by Cummings, "anyone lived in a pretty how town" for purposes of demonstrating tagmemic substitution or in the oft-quoted words of Cummings- "an organized violence done to language". She feels that his most effective substitution is his device of dropping verbs into noun slots as in: "sang his 34 didn't and danced his did" or in "sowed their isn't" or in "wept their came". She also mentions how the poet achieves parallelism with the use of the morpheme, "by". Instead of the expected parallelism in the phrase, "two by two", Cummings substitutes the unexpected such as "bird by snow".<sup>35</sup>

This juxtapositioning of words and images is often signaled on the auditory level by use of the juncture. The common classification of types of

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<sup>33</sup>

Stageberg, p. 63.

<sup>34</sup> Sally Issacs, "From Language to Linguistic Criticism", English Journal, LVII (January, 1968), p. 47.

<sup>35</sup> Issacs, p. 48.

junctions resolves into internal and plus junctions. Emerald Dechant, in Improving the Teaching of Reading, discusses junctions as an aid in developing language readiness. He furnishes this description of junctions:

In speaking, utterances are combined by what are termed "plus junctions"; they are ended by "terminal junctions." The plus junctions separate words; the terminal junctions are usually accompanied by falls or rises in pitch and differentiate one phrase unit from another or one type of sentence from another. The declarative sentence has a slight drop in pitch at the end. Phrasing depends on the placement of junctions.<sup>36</sup>

Norman Stageberg delineates three types of terminal junctions. The first terminal is designated as "the fading terminal." It is characterized by "a rapid fadeaway of the voice into silence and by a considerable prolongation of the preceding word with pitch level 3."<sup>37</sup> Stageberg gives it the customary symbol of a downward-directed arrow. He suggests this junction as indicative of closure in the sentence: "I<sup>2</sup>m going home <sup>3 1</sup>."<sup>38</sup> According to this system, the second type of terminal is a "rising terminal." He describes it as "a short, slight rise in pitch from the last level heard"<sup>39</sup> although he is quick to qualify it as falling short of the next pitch level. "The preceding pitch 3 word is somewhat prolonged, but less so than for the fading terminal."<sup>40</sup> Again,

<sup>36</sup>

Emerald V. Dechant, Improving the Teaching of Reading (Englewood Cliffs; Prentice-Hall, 1964), p. 112-113.

<sup>37</sup>Norman Stagebert, p. 58.

<sup>38</sup>Stageberg, p. 58.

<sup>39</sup>Stageberg, p. 58.

<sup>40</sup>  
Stageberg, p. 58.

the conventional symbol of the arrow is used. This arrow is upward-directed.

It appears quite commonly at the end of 'yes-or-no' questions as in:

"<sup>2</sup>Are you <sup>3</sup>there <sup>3</sup>". The third type of terminal is the "sustained terminal":

One recognizes this terminal by a slight lengthening of the preceding pitch 3 word, less than before the second terminal, and by a sustaining of the last-heard pitch. The following word, however, may be at a different pitch level. Its symbol is /→/. and it may be heard at the end of a long sentence-subject:

All the occupants of the <sup>3</sup>car<sup>2</sup> seemed dazed by the <sup>3</sup>shock<sup>1</sup>.  
To hear this terminal more sharply, compare what happens at "car" with what you hear in this sentence:

<sup>2</sup>The car is <sup>3</sup>ready<sup>1</sup>↓<sup>41</sup>

In symbolizing the intonation contours, the pitch levels are indicated at the beginning of the grammatical unit, the beginning of the syllable bearing the primary stress and the end of unit before the terminal. A pitch number is also used for any other changes of level. Each grammatical unit will have a primary stress. Therefore, somewhere between every two terminals, there must be a primary stress. Primary stress usually accompanies pitch level 3. The reason for this lies within the acoustics of speech production. To produce pitch level 3, the vocal folds must be tensed. A tense voice is replete with stress punctuation.

Using this system, the teacher and students can attempt to characterize some of the basic English sentence patterns. How does a question differ from a command? How are initial grammatical units such as "In short" or "If you'll wait" distinguished from the rest of the sentence? As an aid, children should hum the basic patterns.

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<sup>41</sup>Stageberg, p. 58.

Variations in contour are to be expected for purposes of emphasis.

Stageberg points out that one method of special emphasis involves giving primary stress and a higher pitch level to the word which is to be emphasized. In the following patterns, the first pattern represents normal intonation whereas the second indicates special emphasis:

<sup>2</sup>He wants to eat all the<sup>3</sup> time<sup>1</sup>↓.

<sup>2</sup>He wants to <sup>3</sup>eat<sup>2</sup> all the<sup>3</sup> time<sup>1</sup>↓<sup>42</sup>.

He also calls attention to the cases in which a primary stress on the emphasized word abrogates the primary stress which would normally come later on in the sentence:

<sup>2</sup>He fell into the<sup>3</sup> pond<sup>1</sup>↓.

<sup>2</sup>He<sup>3</sup> fell into the pond<sup>1</sup>↓<sup>43</sup>.

In the above sentences, the pitch gradually slopes down from level 3 to level 1. In cases where the emphasized word has more than one syllable, the syllable with the highest word-stress is given the primary stress and the higher pitch level.

<sup>2</sup>Fifi does not enjoy intellectual<sup>3</sup> games<sup>1</sup>↓.

<sup>2</sup>Fifi does not enjoy intelle<sup>3</sup>ctual games<sup>1</sup>↓<sup>44</sup>.

The next contours formed from the same sentence form illustrate how emphasis placed on different words influences the contour. Although Stageberg does not explicitly point this out, it should be observed that the accentuation falls directly after the change in pitch level. This may be expected in view

<sup>42</sup>Stageberg, p. 62.

<sup>43</sup>Stageberg, p. 62.

<sup>44</sup>Stageberg, p. 62.



of the fact that change in pitch or voice modulation implies contrast. There is no stress in a monotonous pattern. In this illustration, Stageberg reinforces the theory of interpretive encoding as arising from both the ordinary metrical structure of the sentence and from the twists in patterning due to the exigencies of a specific situation. What situations are suggested by the variances upon the normal encoding:

Normal: . Are<sup>2</sup> you walking to the<sup>3</sup> party this evening<sup>3</sup>

Emphatic: Are<sup>2</sup> you<sup>3</sup> walking to the party this evening<sup>3</sup>

Emphatic: Are you<sup>2</sup> walking<sup>3</sup> to the party this evening<sup>3</sup>

Emphatic: Are you walking to the<sup>2</sup> party<sup>4</sup> this evening<sup>4</sup>

Emphatic: Are you walking to the party this<sup>2</sup> evening<sup>3 4 5</sup>

The corollary to terminal juncture is expressed quite often as the "internal open juncture"- a name which implies its position within the sentence. It is located between words and between parts of words. Internal open juncture is indicated by a plus sign /+/. This juncture is identical to the "plus" juncture described briefly by Dechant. Internal open juncture enables distinctions to be made between minimally-paired homophones such as "its praise" and "it sprays". It is possible for the well-trained linguist to depict the occurrence of such a juncture. The complete ramifications are extremely complex and vary with the kinds and positions of the sounds involved.

Practicing the observance of a pause where the internal juncture occurs enables the oral encoder to produce clearer articulation and afford the auditory decoder less ambiguity and greater ease in translating the communica-

tion. An interesting application of internal juncture can be made in terms of spelling. The student is asked to look at the following words. He is to note the original version in Middle English and then to describe how each received a new spelling as a result of incorrect division. The exercise would produce a listing such as:

<u>Present Form</u>	<u>ME Form</u>	<u>Process</u>
newt	an ewte	became "a newt"
adder	a naddre	
apron	a napron	
auger	a nauger	

The problem of when to use "a" as opposed to using "an" is often resolved in terms of the visual rule directing the former term to be used before consonants and the latter to be used before vowels. This is a distribution rule concocted after the spoken linguistic fact. The distinction between the use of the forms has a phonological basis. The sequencing of a vowel sound to follow the vowel "a" creates an internal juncture which is awkward, leaving one, so to speak, with his mouth open. The insertion of an "n" between the vowels provides for a smoother euphonious transition.

As we speak, the changes in pitch that occur within the range of our voices are designated by the general term of "intonation". Where the pitch changes are continuous from one definite pitch to another, without sliding upward and downward, the change is considered to be a step. Pitch variations may be either rapid or slow. Inflections may be classified as rising, falling and circumflex. The circumflex inflection is a combination of rising-falling or falling-rising pattern. It is difficult to be precise. Carrell and Tiffany

state that "It is not possible to be specific about the pitch characteristics since there are so many nuances of meaning that the precise patterns are exceedingly varied."<sup>46</sup>

Studies conducted by Paul Heinberg seem to lend support to the theory that pitch is perceived by the decoder subjectively and relatively. A large number of characteristics were examined as to whether correlations with pitch could be established. It is reported that any relationship between characteristics and behavioral or self-characterized personality traits was coincidental. The only highly correlated findings regarded the prediction of sex from pitch level. However, Heinberg concluded:

... in terms of relationships between used range and perceived personality, relationships are meaningful and clear. The greater the extent of used range, the more favorably will the speaker be looked upon. The more variety in pitch one uses, the more personable and interesting he seems.<sup>47</sup>

Thus, enrichment of the language code should include enlargement of the pitch repertoire.

Heinberg describes characteristic American English intonation pattern in these words: "The first syllable is uttered at habitual pitch level, and the pitch of each successive syllable tends to be higher, with the highest pitch on the most important syllable of the most important word in that idea."<sup>48</sup>

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<sup>46</sup> Carrell and Tiffany, p. 263.




<sup>47</sup> Heinberg, p. 185.

<sup>48</sup> Heinberg, p. 195-196.

This description leads support to Stageberg's pitch level 2 as being the normal level with levels 3 and 4 representing the two more emphatic levels. Although Heinberg feels that the connotation of emotional states are not restricted to rigid, unvarying pitch contours, he does outline several emotional states as conveyed through pitch contours. Fear is characterized by use of an extremely high pitch level. There is an extremely wide pitch range within which occur wide pitch shifts between ideas or concepts. Anger evinces an extremely wide pitch range and is exhibited in all sorts of inflections and intonations. Contempt is conveyed by extremely wide inflections at the end of ideas. A pitch level lower than the habitual one is used. There are many upward inflections within concepts and ideas. Grief consists of a vibrato together with a very narrow pitch range, a slow rate of pitch change on inflections and many small changes in pitch.

In the face of Heinberg's long-winded passages denouncing attempts to accurately describe intonation contours and pitch variants, he presents what he considers to be "International Symbols" for use in the decoding and encoding of intonational components of the printed or spoken word. The system is interesting, but rather complex:

<u>Symbol</u>	<u>Employed On</u>	<u>Indicates</u>
<hr/>	Ideas	Producible range (Upper line is highest Lower line is lowest)
<hr/>	Syllabic consonants or monosyllabic words containing or as only vowels	Minimal duration and / or intensity at that pitch level
<hr/>	Single syllable or monosyllabic word	Duration, at a single level, corresponding to extent of line length

<u>SYMBOL</u>	<u>EMPLOYED ON</u>	<u>INDICATES</u>
	Single syllable or monosyllabic word	Rate, extent and duration of downward inflection
	Single syllable	Rate and extent of upward inflection by slope (rate of change) and vertical length of line
	Single syllable or monosyllabic word	Rate, extent and duration of upward followed by downward inflection <sup>49</sup>

The major flaw in the above-described system is its complex visual patterning which does not have a direct translation in terms of vocal encoding. For instance, a line can be gracefully arched as in the visual description of "It's three o'clock?" and yet the voice cannot be made to exactly duplicate the pattern:

Moreover, the amplitude and tremulos present in certain speaking voices would create a zig-zag pattern with no graceful curves at all. Yet, this type of voice is capable of intoning the sentence meaningfully. Also, no duration table is furnished to equate the speaking time with the length of the dashes despite the fact that the length of dashes becomes an intricate feature of Heinberg's representational system. Part of the translation difficulties arise due to the voice's movement in series of vibrations rather than in a linear path.

Heinberg does offer insight into the relationship between visual and auditory construction on the syntactic level. He relates that intonation is

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<sup>49</sup>Heinberg, p. 194.

used to indicate relationships among ideas:

Independent ideas are obviously intoned independently. Parallel ideas are intoned as similarly as possible, and the parallel elements are intoned at the same, highest pitch level. Dependent ideas are intoned so that the contrasting terms are intoned at the same, highest pitch level. A parenthetical idea is intoned with pauses separating it from the basic idea and at a lower pitch level, if as is usually true, the parenthetical idea is less important.<sup>50</sup>

Of course, if the parenthetical idea is deemed more important or must receive special emphasis, it is intoned at a higher level than the basic idea. Therefore, a vocal pitch level contrast serves to separate the parenthetical from the main part of the sentence. In addition, it should be observed that the pitch level on the last syllable before the parenthetical idea is the same as the pitch level on the first syllable following the parenthetical idea. How would the double subjects in the sentence, "Tom and Jerry went to the store" be vocally distinguished? How would the intonation pattern change when the above sentence is used in answer to the question, "Where did Tom go?" In his formulation of answers to these questions, the student will be shown that intonational patterns were many and varied although visual punctuation marks or parentheses are only sparsely applied in comparison.

As a pre-requisite to the practice of intonational encoding, the student should be able to produce a wide range of pitches. With guidance from the teacher, he should examine his ability to locate ideas and identify important words within an utterance. Using a number of sentences, the student should decode them first by means afforded within conventional grammatical analysis

and then compare the results with those obtained by means of phonological clues. Finally, the student should practice reading sentences and paragraphs using proper intonation contours. The teacher should point out that immediate constituent analysis can be of aid in uncoiling the sentence to be interpreted. To take a simple example-"She ate an apple, a pear and a banana" would be divided first, into "she" and the verbal phrase, "ate an apple, a pear and a banana." The verbal phrase would in turn be divided into "ate" and the various items eaten. Further subdivisoning would separate the article from the noun in the three phrases. From this analysis, questions could elicit proper intonation: "What did she do; what three types of fruit did she eat. The answers as encoded within an intonational contour would take the form:

She ate an apple, a pear, and a banana.

For any transcription system to be considered as basic within the study of intonational patterning, it should serve the student both in his role of encoder and decoder since auditing is indispensable to producing and vice versa. The above system seems to be directed toward a person who is not able to rely upon his hearing. In view of the linguistic premise that sound precedes visual cataloguing of language, the most direct route would be from auditory stimulus to vocal production. As Cass points out, "A speech intonation pattern, like a melody in music, consists of variations in pitch, force, timing and quality."<sup>51</sup> Intonation patterns are a composite of the tonal expression of thoughts and feelings, the speech personality and the auditory

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Cass, p. 256.

and vocal skills of the speaker. Cass observes that:

although different speakers would use somewhat different intonation patterns in expressing substantially the same meaning, the vocal changes used by virtually all speakers are conventionalized sufficiently to permit the average listener to understand their meaning.<sup>52</sup>

The initial goal in reading instruction is to enable the child to derive meaning from the printed word symbols at the same level of functional efficiency he has already attained in getting meanings from spoken words. The best readers, according to Guy Buswell, have a mental awareness "of the stresses, elongations of words, changes of pitch and intonation and rhythms of sentences..<sup>53</sup>

Tanner, Wittetoe and Shutes in their textbook, English 7: Language Composition and Selected Reading Skills, advise the student that "In order to to read the pronunciation symbols in the dictionaries, you must work with care and patience on a number of special skills."<sup>54</sup> The stress marks used in the text are the (') for primary or heaviest stress with (') for secondary stress. The stress patterns are shown on three levels, thereby graphically underscoring the close tie between stress and intonation. While undertaking the exercises, the students are urged to exaggerate the stresses to help them "...hear and feel the stressed and unstressed syllables."<sup>55</sup> The exercise is unusual in

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<sup>52</sup>Cass, p. 265.

<sup>53</sup>Guy T. Buswell, "The Process of Reading", The Reading Teacher, XIII (December, 1959), 114.

<sup>54</sup>Bernard Tanner, Craig Wittetoe and Robert Shutes, English 7: Language Composition and Selected Reading Skills (Menlo Park: Addison-Wesley Publishing Co., 1968), p. 65.

<sup>55</sup>Tanner, p. 65.

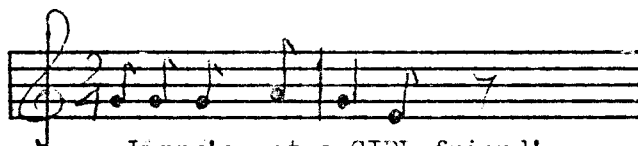


design. It may be well to indicate an example or two of this type of notation:

chu		pot	
Mas		hip	
sa	setts	po	a mus

The similarity to musical staffing is obvious and may suggest a humming or singing pattern to the children as they orally encode the answers.

Nursery rhymes and children's games should not be overlooked in an examination of forms of language. These forms bear a very direct relationship between the sounding of them and the meaning or attitude to be conveyed. These are the attention-getting devices of language. They are the poetry of our childhood. Even simple rhymes which children sometimes use to taunt their enemies or friends in disfavor for the moment fit, as if by magic, a single unmistakable cadence:<sup>56</sup>



Jimmy's got a GIRL-friend!  
I know something YOU don't.  
Bill's the teacher's PE-et!

Friends may be characterized within a single chanted phrase such as: "Silly Billy!" or "Johnny Joker". Sayings were always said with a rhythmic beat as in:

One potato, two potato, three potato, four:  
Five potato, six potato, seven potato-MORE!

Puns and a variety of jokes revolving around incorrect intonation or incorrect stress patterning should also serve as class illustrations.

Primitive man had a rather elaborate code of intonation and rhythm. The students may enjoy examining the sayings, poetry and songs of primitive people and perhaps, trying to imitate some of his chants in modern English. A scholarly book which can be easily adapted for classroom use is Primitive Song written by C. M. Bowra. Bowra explains that "Song arises from rhythmical action..."<sup>57</sup> He points out that the action antedates the rhythmical words "which are added to it and give to it a new, clarifying element."<sup>58</sup> Bowra discusses primitive songs which are composed of simple tunes and often, accompanied by instruments. According to the author, words form only a part of the complex unit in most primitive songs. "Words, music and movement present a single unity and each element can be judged at its full worth only when it is at work with the others."<sup>59</sup> Students should be urged to re-create certain of these songs in order to gain appreciation of the unity of expression within different dimensions of the language system which this media so aptly illustrates. This song is about a coconut ape. It is a Semang song which reflects the language system's extensive use of alliteration:

O'tign tod'n ca tig'n leg'n  
ilel kemo' bateg'n.

He runs up and down, look on all sides,  
Sees the fruit of the bateg'n.<sup>60</sup>

How do nasal sounds and the vowel repetition sequence establish the cadence?

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<sup>57</sup>C. M. Bowra, Primitive Song (Cleveland: The World Publishing Co., 1962), p. 29.

<sup>58</sup>

Bowra, p. 29.

<sup>59</sup>

Bowra, p. 28.

<sup>60</sup>

Bowra, p. 84.

How would the rhythmic pattern be described? A rhyming verse from the Australian Euahlay depicting a mother beating her child over the shoulders with the wing of a buzzard can be compared as to structure with a Tasmanian song which refers to a water-rat. The Euahlay verse reads:

goobean gillaygoo  
oogowahdee goohaygoo  
wahl goonindoo,  
ghurranbul daygoo.

A swimmer be,  
To swim against the flood,  
No water  
Strong enough to stop you.<sup>61</sup>

The Tasmanian song is recorded as:

a re-na-too  
ket-a-te-e-vepa  
mel re-pa-too  
a re-na-too<sup>62</sup>

After examining these songs, the students should be able to formulate similarities of intonation patterns and features shared by the various languages.

Children in the class who know of songs or poems or verse as encoded in a foreign language should be encouraged to contribute. The class may be asked to perform these pieces. They should be able to discuss how rhythm exists independently of word translation. Word for word translation cannot capture the rhythmic whole. For instance, Bowra could not find a suitable translation for the water-rat song which would uphold its unity. Rhythm can exist even after the original word meanings are lost or unknown.

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<sup>61</sup>

Bowra, p. 84.

<sup>62</sup>

Bowra, p. 84.

Nursery rhymes written in English can be utilized in much the same way.

Actually, the character in the nursery rhyme chants his character in the sense that the duration and timing elements within the particular character's speech usually provide ample index to his personality. "To bed, to bed," said Sleepy Head. James Kissane comments upon this well-known speech:

There is an urgency- we might even say the exasperation of fatigue- in the repetition of "to bed" and especially in the triple rhyme of which that phrase is a part. The strong iambic rhythm completes this precipitous effect, and the explosiveness of the "t", "b" and "d" sounds suggests Sleepy Head's frustrated efforts to jerk or prod the others into calling it quits for the night.<sup>63</sup>

In counterpoint to this rhythm, the part of Slow reads: "Tarry awhile." The pace of the dialogue subsequently slackens. Kissane observes, "... there are no rhymes at all as Slow's line meanders to its end. It has one foot less than line one, but the retarded tempo makes it seem at least as long."<sup>64</sup>

Despite the use of melody patterns within language structuring, Robert Hall reminds us that:

Any given language develops the possibilities of variation in prosodic features only to a relatively small extent, with perhaps four or five relative levels of directions of pitch, not more than four distinctive levels of stress, and normally not more than a two-way contrast in length at the most (long versus short)...<sup>65</sup>

Children have learned these patterned contrasts at an early age. They are deep-rooted signals and yet, the language curriculum has largely ignored this

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<sup>63</sup>

Kissane in A Preface to Literary Analysis, p. 20.

<sup>64</sup>

Kissane, p. 21.

<sup>65</sup>

Hall, p. 412.

correlation.

Theories concerned with relationships between linguistic and musical structure have been developed since the Seventeenth Century. The most extensive system of musical-linguistic relations was outlined by Jean Phillippe Rameau (1683-1764). Within the system developed by this musical composer, each pitch-relationship was connected to a specific emotional meaning.

Probably, the theories were based upon the misleading premise that language is rigid and highly structured with uniform production patterns. Within the musical setting, the composer, conductor, orchestra and other trappings represent a closed system. Language, however, is open-ended and constantly changing. In retrospect, it would seem that such musical-linguistic theories fell into disfavor because they held to too strict a categorization of language patterns in terms of conventional music scoring or arranging. Robert Hall concludes his section, "Linguistics and Music" in *Introductory Linguistics* with the thought that "...it is reasonable to expect....there would be a certain foundation for the musical structure of a community's practice in the intonation, the other prosodic features and the basis of articulation of its speech."<sup>66</sup>

Since the 1900's a number of different approaches have evolved. One system of notation which is currently enjoying somewhat of a comeback in the writings of linguists is that espoused by the British school and which harkens back to the writings of Daniel Jones.

Jones promulgated the use of suprasegmental "tunes" which parallel on the acoustical level, the breath-group on the phonatory level. Jones evolved a quasi-instrumental approach to intonation patterns.

Using a set of recordings of English and French conversations and dramatic readings as his corpus, Jones would regularly lift the needle off the gramophone and record the last pitch he had heard. He then transcribed the pitches in terms of a musical scale. He placed a phonetic decoding of the recordings under the pitch notations. Liberman evaluates these transcriptions as quite accurate, "...since the ear can resolve variations smaller than 1 cps. in the fundamental frequency of vowel-like sounds."<sup>67</sup> Jones offered the resultant contours as useful teaching aids although he did not discuss the meaning of the contours to any appreciable extent. Advanced students might try to duplicate the experiments of Jones on a small scale to determine some of the characteristic patterns of contemporary English speech.

Henry Sweet, during the early 1900's, was another linguist who contributed to intonation theory. He approached the description of pitch contour by means of "tones". The tones occurred on specific vowels. The intonation pattern of the utterance was determined by the sequence of tones that would rise and fall periodically. Some of his followers grouped the tones into suprasegmental "tone-patterns" and often related the tone patterns to certain sentence types. The phonetic elements employed within Sweet's new grammatical analysis were originally used by Walker in 1787. Sweet published his

New Grammar in 1892. His two-page analysis serves as the prototype of subsequent tone analyses. He depicted intonation as either level, rising or falling. He was one of the first to note, "When excited we speak in a high pitch or key, when depressed in a low key."<sup>68</sup> The non-level tones can pass through different intervals, the greater the interval, the more emphatic the tone becomes. This observation can easily be substantiated by simply feeling the throat under the stress condition imposed by shouting or screaming and again, feeling the throat area while reciting a droning or tiresome passage.

It was Sweet who introduced the ~~now~~ commonplace intonation symbols (✓) and (∧) which indicated a rising and a falling intonation, respectively. He used tones as symbols akin to the segmental IPA notation for vowels and consonants. According to Lieberman, recent research shows that Sweet's intonation notation can be used to transcribe the patterns of English utterances quite accurately.<sup>69</sup>

An interesting adaptation of Sweet's theory is found within H. E. Palmer and W. G. Blandford's A Grammar of Spoken English on a Strictly Phonetic Basis. The authors relate tone-patterns to various types of sentences. The high or low falling tones are marked as (∨) or (↘) whereas, the high or low rising tones are designated as (↗) or (↘). One rise-fall-rise combination tone is indicated by : (↗↘). Each tone is regarded as a sort of nucleus which is

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Lieberman, p. 171.

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Lieberman, p. 173.

preceded by head and followed by a tail.

The writer proposes that intonation patterning can be used to identify periodic as opposed to loose sentence construction. Periodic sentences are rather like intricate melodic patterns. "Periodic sentences are more emphatic than loose ones, more adapted to the expression of a tight, logical pattern of thought...They end up with a bang."<sup>70</sup> The periodic sentence is considered to be dramatic in the sense that the closely-woven elements gradually work up to the punch words reserved until the last of the utterance. "Extended concealment, growing suspense and sudden revelation is the technique of the periodic sentence."<sup>71</sup>

Let the following sentence serve as an example:

In spite of all that has been said of this book's elevated morality, of its noble intent, and of its solid foundation in research; regardless of its popularity with the public, its appeal to Hollywood, and its reflection of our disordered society; in spite of anything which may be said in its defense, it still adds up, totally and unmistakably, to absolute and utter drivel.<sup>72</sup>

The regular repetitions of stress patterning and the series of internal junctures placed before the final word of the sentence identify the sentence as a periodic construction. The variety of structure afforded in such a sentence

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<sup>70</sup> Calvin D. Linton, "Effective Revenue Writing", United States Treasury Department Training Manual, No. 83-O (Washington, D. C., 1963), p. 79.

<sup>71</sup> Linton, p. 80.

<sup>72</sup> Linton, p. 79-80.



arrangement is a contrast to the loose sentence structure. The periodic crests of pitch level and the frequency of internal pause contribute to the dramatic build-up of the sentence. In his discussion of pitch levels and terminals, Stageberg relates that the normal intonation contour is modified when certain words or phrases are emphasized. "One way to get special emphasis is to give primary stress and a higher pitch level to the word we wish to emphasize."<sup>73</sup> This method is utilized in the sample sentence; particularly, with regard to the final burst of energy expended upon "drivel". The number of primary and secondary stress marks and the relative lack of weak stress marks create an emphatic tone.

These features of the periodic sentence stand in contrast to the structure of loose sentences which adhere quite closely to the iambic pentameter of normal conversation. A typical loosely-structured sentence is the following: "The purpose of this chapter on transformations is to give the student an introduction, simple and very limited in scope, to a generative-transformational grammar of English."<sup>74</sup> Notice that the regular meter underscores the simple straight-forward construction. The modifying phrase, "simple and very limited in scope", serves to restrict the term, "introduction" as opposed to the series of modifying phrases in the earlier periodic sentence which progressively enlarge upon the theme.

At the present stage in linguistic theorizing, it seems prudent to suggest that the teacher be eclectic in her methods and incorporate a number

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<sup>73</sup>Stageberg, p. 62.

<sup>74</sup>Stageberg, p. 285.

of approaches to intonation analysis depending upon the information sought and upon the grade level of the students. It may well be that since rhythm is a pervasive whole, attempts to isolate the elements will never be entirely fruitful. Modern studies in versification have shown that certain metrical systems are incompatible with some linguistic systems. Stankiewicz views meter itself as a theoretical construct, "an abstract scheme that is never fully implemented somewhat like a phonemic pattern with empty slots."<sup>75</sup> He adds that the implementation of the metrical scheme is conditioned by the underlying linguistic system.

Changes in the phonemic pattern of a language lead to ultimate changes in metrics. "Every poem is an autonomous unit of higher organization which is based on a set of generally observed norms, but which also admits areas of relative freedom."<sup>76</sup> Everyday casual language is not so different from poetry except perhaps in the periodic organization of the message. Slowly, those concerned with the language arts are coming to the realization that sound belongs as an integral part of message formation. In 1925, Edward Sapir lamented: "There used to be and to some extent still is a feeling among linguists that the psychology of language is more particularly concerned with its grammatical features, but that its sounds and its phonetic processes belong to a grosser physiological substratum."<sup>77</sup> Sapir continually emphasized the range of variation even within "typical" expressions or language reactions and declared that utterances should be analyzed as variants distributed about a norm or type.

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<sup>75</sup> Edward Stankiewicz in Essays on the Language of Literature edited by Seymour Chatman (Boston: Houghton Mifflin Co., 1967), p. 77.

<sup>76</sup> Stankiewicz, p. 80.

<sup>77</sup> Edward Sapir in Readings in Linguistics edited by Martin Joos (New York: American Council of Learned Societies, 1958), p. 19.

## CHAPTER FIVE

## ENCODING AND DECODING OF BASIC SENTENCE PATTERNS

Moving from immediate constituent analysis and theories, certain linguists began to fashion an entirely different spindle as the case about which types and kinds of sentences and other expressions could be measured and manipulated. A number of basic sentence formations serve as the kernel from which more elaborate sentences evolve.

The method used in unraveling the constituent structure of a sentence became known as a "generative grammar" approach. The central idea of this method was developed from combinatorial systems in the study of formal logic undertaken by Post in 1936 and 1944. Using a basic axiom as a point of departure, rules of formation are applied which permit the rewriting of the axiom in certain ways until the desired sentence structure is finally derived. "If the rules are formulated property, only the grammatical sentences will be derivable; all other sentences will be ungrammatical."<sup>1</sup> Along with the rules of formation, tree diagrams of outlines represent the structure of the grammatical sentences. Both the rules and the tree outlines are purely formal devices for representing word groupings. The system is a quasi-mathematical system in that the information is circumscribed in the given sentence which then must be demarcated into its phonological-morphological constituents or else, a series of rules are given which unambiguously dictate the creation of the final sentence product or encodment.

Although phonemic and phonetic analysis provide an insight into meaningful structures in our language, "...in ordinary conversation the functional unit of

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George Miller in The Psychology of Language, Thought and Instruction edited by John P. De Cecco (New York: Holt, Rinehart & Winston, Inc., 1967), p. 40.

speech perception is usually larger than a single word or a single morpheme and more nearly the size and shape of a syntactic constituent."<sup>2</sup> Thus, the generative grammarian thinks about grammatical utterances as contained within the conformations of sentence formations. In his book, Syntactic Structures, Noam Chomsky proposed that "From now on I will consider a language to be a set (finite or infinite) of sentences, each finite in length and constructed out of a finite set of elements."<sup>3</sup> Further, he asserts that "All natural languages in their spoken or written form are languages in this sense since each natural language has a finite number of phonemes and each sentence is representable as a finite sequence of these phonemes though there are infinitely many sentences."<sup>4</sup> Chomsky hopes to create within the language system of English a grammar that will generate all of the grammatical sequences while at the same time, excluding all the ungrammatical ones.

The ultimate arbitrator of whether or not a particular string or segment of language is grammatical is the native speaker of the language or a coalition of such speakers. Generative grammarians often refer to this umpiring of the language system as "intuitive processing". Even as children, speakers of a language come to have quite an impressive command of the syntactical patterning of the language. Often, the presence of language skill is attributed to the child's imitation of an adult's utterance. Recent linguistic studies have called attention to another important process within the child's acquisition of language;

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<sup>2</sup> L. Hampe in The Psychology of Language, Thought and Instruction, p. 58.

<sup>3</sup> Noam Chomsky in Language and Thought edited by Donald C. Hildum (Princeton N. J.: D, Van Nostrand & Co., Inc., 1967), p. 91.

<sup>4</sup> Chomsky, p. 91.

that of analogizing.

Regarding this process, Brown and Bellugi state that:

So long as a child speaks correctly, or at any rate so long as he speaks as correctly as the adults he hears, there is no way to tell whether he is simply repeating what he has heard or whether he is actually constructing. However, when he says something like, "I digged a hole" we can be sure that he is constructing.<sup>5</sup>

The authors feel that the fact that an adult would scarcely be heard to decode, "I digged," means that the child has created an analogy based upon the common "ed" ending to signify the past tense of regular verbs. The authors conclude that "The inductive operations of the child's mind are externalized in such a creation."<sup>6</sup> They point out that the patterns of language which a child can handle extend beyond the processes of imitation and expansion. Processes such as represented by analogies enable the child as well as the adult to generate sentences which are unique and which are original, perhaps to the extent of their having had no prior formulation. The authors attribute this ability to a latent rule structure which is "...so general that a child can spin out its implications all his life long."<sup>7</sup>

Generative rules must in any event be applied to a basic schema. William Epstein defines syntax as "the generalized pattern or schema which is imposed upon the reservoir of available words and determine the sequences of these words."<sup>8</sup> Generative-transformationalist grammarians posit the existence of a

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Roger Brown and Ursula Bellugi in *Language and Thought*, p. 98.

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Brown and Bellugi, p. 99.

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Brown and Bellugi, p. 99.

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William Epstein in *Language and Thought*, Edited by Donald C. Hildum (Princeton, N. J.: D. Van Nostrand & Co., 1967), p. 108.

kernel sentence which is a simple declarative sentence upon whose form an unlimited number of sentences may be fashioned.

The resolution of a given sentence into a basic kernel sentence formation serves both as an aid in uncovering the basic constituent character of the sentence and as an aid to memory. This latter function was explored by Epstein and reported in an article entitled, "The Influence of Syntactical Structural on Learning." He tested the hypothesis that verbal messages are encoded "...according to a set of grammatical rules which create a learning matrix different from the random-structure of a series of independent items such as a list of nonsense-syllables."<sup>9</sup> The results of the experiment indicated quite clearly that syntactical structuring facilitates learning.

He presents implications of the experiment along lines suggested by current linguistic investigation. In attempting to integrate the results of the experiment within the semantic analytical model proposed by Osgood, he suggests that "the facilitation of learning in our experiment might be understood as another demonstration of the operation of predictive integrations in the grammatical mechanisms that interrelate larger message events."<sup>10</sup>

Epstein believes that the frequency with which grammatical redundancies occur in ordinary language results in strong predictive integrations within the nervous system that match the structure of the language. Here, Epstein may have reference to the 'on-off' synapsis mechanism of the nervous system which is strikingly parallel to the bit-by-bit alternation processing imposed by syntactical build-up within sentence structure.

John De Cecco maps out redundancies in terms of left-recursive; right-

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<sup>9</sup>Epstein in Language and Thought, p. 108

<sup>10</sup>Epstein, p. 113.

recursive and self-embedding while declaring: "One important feature of grammatical rules that linguists have proposed is that they are recursive."<sup>11</sup> This same value is discussed in Epstein's article. Epstein mentions that integrative systems make encoding and decoding of congruent messages easier".... by restricting the number of alternative responses and by ordering the probabilities attached to the various alternatives."<sup>12</sup>

The role of grammatical redundancies in response-selection and learning has also been considered as a new tool or instrument for measuring readability. Vincent Louthan in his article, "Some Systematic Grammatical Delections and Their Effects on Reading Comprehension", offers insight into this concept. In his study which was published in the English Journal of April, 1965, he reports utilization of the cloze procedure to determine the contributions to meaning of certain kinds of words and the relative difficulty of the reading matter within a prose passage. He expresses decoding of written material in a manner analogous to the decoding of grammatical construction. He notes that sophisticated readers do not focus equally on all words within a reading selection. "Given a prose passage to read with care, one may or may not skip words or phrases, may even ignore many of the morphological endings and many of the grammatical cues"<sup>13</sup>

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John De Cecco in Readings in Linguistics, Vol. II edited by Eric Hamp and Fred Householder and Robert Austerlitz (Chicago: University of Chicago Press, 1966), p. 46.

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William Epstein, p. 113.

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Vincent Louthan, "Some Systematic Grammatical Deletions and Their Effects on Reading Comprehension", English Journal, LIV (April, 1965), p. 295.

Even in those cases wherein the reader does glance at every word on a page, "he does not devote equal thought to individual words."<sup>14</sup> By this statement, Louthan is not suggesting that the reader is an impressionist but rather, he is alluding to the idea that a word in isolation is an abstract concept.

Charles Carpenter Fries distinguished between "structure-centered" reading and "item-centered" reading. However, it would be incorrect to adduce that the process of comprehending whole structures exists apart from individual words and morpho-syntactic items. As Louthan declares, "Individual words within structures carry the burden of meaning of the whole structure, but...the systematic deletion of some kinds of words tends to produce marked variability in the reader's comprehension."<sup>15</sup>

Apparently, Ebbinghaus in 1897 was the first to use the "cloze" technique. The name, "cloze" derives from the Gestalt theory of closure in which it is held that humans tend to complete as a whole what is encoded only as a partial pattern. For example, a circle constructed of disjointed arcs is easily perceived as a circle even though the circle configuration is described as being a closed line. The cloze technique was resurrected from relative obscurity in the early 1950's.

Using the cloze procedure, Wilson and Taylor attempted to measure the readability of prose passages of varying difficulty by means of systematic depletion of language patterns. This was accomplished by removing every tenth word or N percent of the words at random. Upon confronting the mutilated

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<sup>14</sup>

Louthan, p. 295.

<sup>15</sup>

Louthan, p. 295.



passages, readers were asked to replace the words they had never seen so as to be able to properly decode the message. This required on the part of the reader both a grasp of the language structures on the page and an understanding of the substance and tone of the passage under inspection.

Louthan's method was enacted in a similar manner. The cloze mutilations were made by dividing the passages into segments of ten words. A random number was chosen for the first word, from 1 to 10. That word coming closest to the end of each segment fitting into the desired grammatical percent deletion was removed in order to effect ten percent deletion evenly throughout the material. The deletions represented an impressive cross-sectioning of grammatical segments such as specific modifiers, prepositions, conjunctions, etc. The first finding which Louthan reported could also serve as an exercise in learning to decode the written symbols of language via reading.

Louthan states that "the removal of function words, the syntax and morphology of which already signal the grammatical relationships in a sentence, probably tends to focus the attention of the reader on the larger units of meaning of the passage being read."<sup>16</sup> From his experimentation, he also predicates that the novelty of the situation where the reader substitutes as accurately as possible the missing words from the passage contributes to the efficiency of the decoding. Redundancy is also a factor allowing for adequate decoding of the deleted passage. From these observations, Louthan concludes: "It is apparent that if structural relationships within an utterance are expressed simultaneously by two or more grammatical devices, one or more of the

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Louthan, p. 298.

structural pointers may be unnecessary."<sup>17</sup> Here, then, is experimental support for the substitutive quality of language units as provided for by the redundancy within the English language system. Further experimentation should be undertaken to determine what types of words bear the greatest burden in transmitting written material.

Louthan feels that the result of his experimental training system does "demonstrate that an efficient reading process may be induced in students."<sup>18</sup> The training of students to create a whole from assorted structural clues fits into George Miller's information theory of memory. The essence of Miller's theory is that people remember a constant number of "chunks" of information irrespective of the amount of information per item or bit. The learning of new material proceeds on the basis of the formation of chunks or the reorganization of the material into a small enough number of chunks which is technically called, "recoding." When a person is able to recode a sentence into the number of chunks corresponding to the size of the immediate memory span, the entire sentence can be recalled. Thus, a skeletal sentence structure which can be provided by reducing a sentence to a kernel or basic sentence type can aid in sentence recall. Such a basic sentence structure can serve as an outline or model system to which any particular sentence of the general sentence type may be appended. The slots are the same but the items differ. Lending support to this contention is the following statement

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<sup>17</sup>Louthan, p. 299.

<sup>18</sup>Louthan, p. 299.

by Epstein:

Material which is not syntactically structured may be harder to learn than structured material because the latter is already organized whereas the former can be organized into more efficient chunks only<sup>19</sup> through the intentional efforts of the learner.

Not entirely unrelated to the above is the possibility that messages which are cast in syntactical form are more easily learned because different strategies of learning are employed for organized as opposed to unorganized material. Epstein cites the recent investigations conducted by Janes Deese and R. A. Kaufman involving the serial effects in the recall of unorganized and sequentially organized verbal material. According to Epstein, these authors reported that the order of recall for randomly arranged words correlated with the frequency with which the individual words were recalled.<sup>20</sup> Epstein charts a new path in his succinct summary of this type of experimentation. He states that "...syntactical structure facilitates verbal learning apart from the contributions of meaningfulness, familiarity and sequential probability."<sup>21</sup> It is not an exaggeration, then, to say that the exploration of syntactical structure has many ramifications within language learning and within learning itself.

An old standardized version of the correct sentence form showed it to consist of a noun plus a verb usually accompanied by modifiers such as adjectives, adverbs and prepositions. The kernel sentences of generative

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<sup>19</sup>  
Epstein, p. 113.

<sup>20</sup>  
James Deese and R. A. Kaufman as quoted in Epstein, p. 114.

<sup>21</sup>  
Epstein, p. 115.

grammar can be fashioned within this traditional definition of a sentence. Considering this definition, we would expect that the kernel sentences preserve the nominative aspect in the first slot; the verbal constituent immediately following with a variety of sentence completers such as adjective, noun, etc. The following basic sentence patterns should be all-inclusive for the simple, declarative sentence and should be capable of extension into more elaborate patterns:

1. N be Adj.  
John is happy.
2. N be Adv. (usually location)  
John is there.
3. N be N<sup>2</sup>  
John is Jack.
4. N InV  
John fell.
5. N TrV N<sup>2</sup>  
John tagged Jim.
6. N TrV N<sup>2</sup> N<sup>3</sup>  
John gave Jim money.
7. N LV Adv.  
John looks well.
8. N LV Adj.  
John seems happy.
9. N LV N<sup>2</sup>  
Men become doctors.

It should be noted that the kernel sentence has a fixed order of subject followed by predicate which is the order characteristic of English sentences.

In constructing these sentences for the purpose of examples, the writer was careful not to include extraneous words which might cloud the pattern. However, the basic sentences are actually patterned on the basis of function rather than on form. For instance, the noun slots in the sample sentences are filled in with proper nouns in terms of form. The function slot, "noun, could also be filled in with an article form followed by a noun form, such as "the boy". Although the pronoun form can also fit this function slot, many transformationalists feel that the substitution of a pronoun for a noun is actually a transformational process. Since the purpose of this author is to clarify the presentation of patterns, the noun function was consistently filled in with a noun form.

Sentences which fit the patterns every bit as well as those which were listed, can reflect rather unusual idiomatic expressions and can contain a number of words. For instance, both of the following sentence forms conform to pattern 8: "The cow ran dry" and "He proved true to the cause". Stageberg lists "His face went pale" as a basic sentence conforming to pattern 8.<sup>22</sup> The formation of "his face" presents an intriguing problem. "His face" cannot qualify as an article followed by a noun since the articles are strictly delimited to "a-an" and "the". Perhaps, it qualifies as a demonstrative pronoun such as "this table". "This table" fits the query, "Which table is it" but can "his face" answer "whose face is it?" in an analagous fashion? "His face" seems to be rephrased as "the face of him". If this is the case,

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Stageberg, p. 186.

then the form "his" is a substitute for a preposition and a pronoun object and for that reason, seems more akin to the pronoun. Such a question as this illustrates the very fine points involved in setting rules for the make-up of the basic sentences from whose corpus the entire network of sentences must be generated. Sentences represented by pattern 9 can contain a number of words such as in the sentence form of "Donald continued my friend, despite our differences." A pattern 4 sentence would most likely contain a modifying phrase such as in the sentence form of "John fell into the stream" or of "John fell down from the roof of the house."

Joseph Aurbach and his fellow authors in their guide for teachers titled, Transformational Grammar, point out that the following are examples of non-kernel sentences which although containing identical sentence elements as those within the constituency of the kernel sentences, do not maintain the proper order. Only by means of a transformation can the elements in these non-kernel sentences be restrung (reordered) into a kernel sentence:

Vast is the theatre.

On the porch is the milk.

Upstairs were some relatives.

A nuisance, it had become, for everyone in the neighborhood.<sup>23</sup>

The last sentence represents a configuration known as an embedded sentence which indicates that a group of words have been worked into the sentence through recourse to an elaborate transformation.

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Aurbach, p. 16.

Kernel sentences are not passive. The following sentences represent transformations since they must be transformed into an active construction in order to be constructed as a kernel sentence: "The receiver was lifted by somebody" and "A strike is thrown by the pitcher."<sup>24</sup>

Kernel sentences can not contain a negative auxiliary to the verb such as inclusion of the word, "not". "Kernel sentences are affirmative rather than negative."<sup>25</sup> A sentence encoded as, "The book is not on the shelf" does not represent a kernel sentence. To state that "kernel sentences are affirmative" does not, it seems, sufficiently clarify the situation with regard to use of negative auxiliaries. For example, the word "not" is an independent sentence element interrupting the sequence of noun-verb in the above sentence. "Talk does not seem futile" is the example given in Transformational Grammar.<sup>26</sup> In this sentence, the "not" interrupts the linking verb-adjective sequence. The interruptive effect of "not" and the like seem to be the real reason for their exclusion from kernel sentence formation. The original explanation given would not resolve the problem of "John is unhappy". "John is unhappy" is a perfect example of pattern 1. Semantically, the sentence is negatively, rather than affirmatively cast. The only way to exclude this sentence would be to insert a morphological rule within our phrase-structure grammar which would necessi-

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<sup>24</sup>

Aurbach, p. 17.

<sup>25</sup>

Aurbach, p. 17.

<sup>26</sup>

Aurbach, p. 17.

tate as obligatory the separation of a "un", "non-" and in some cases, an "in" prefix from its root word and the insertion of a "not" or appropriate form within the sentence as an independent element. The application of this rule would restring "John is unhappy" into "John is not happy" and thus, drop the formation from consideration within the kernel sentence category. The degree to which semantic word implications can be reflected within phrase-structure rules would seem to be limited. In the long run, the correlation of morphological-phonological rules within transformational analysis will be largely decided by those who are responsible for the rule-structuring within that particular schema of transformational grammar.

For the sake of instructional novelty and also for the sake of an inductive exercise for demonstrating to students that the sentence form can be decoded without dependency upon the meanings of the individual lexical units, Peter Youmans has devised "Boingauge". Youmans acknowledges as the source of his invention, comments made on a number of occasions by Professor Fries who felt that nonsense words could be utilized within kernel sentences.

Youmans frames his lexical units in "Boingauge" although the operational system is that of English. First, Youman confronts the students with a scrambled boingauge, "THE HAS BOINGER BOINGIZED BOINGIANS A".<sup>27</sup> The students are asked to shift sentence elements around so that a real Boingauge sentence is derived. Students typically sight these grammatically, well-constructed

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Peter N. Youmans, "Practicing Linguistics," English Journal, LIV (April, 1965), p. 331.



sentences:

A BOINGER HAS BOINGIZED THE BOINGIANS.

A BOINGER HAS THE BONGIZED BONGIANS.

HAS A BOINGER BOINGIZED THE BOINGIANS.

This exercise was designed for high school students. In adapting this idea to the lower grades, it might be wise to write the given scramble preserving the capitalization which is attendant upon their position within the sentence. This type of prompting, aside from furnishing clues, supplies a good review of the importance of punctuation as a meaningful signal within the sentence.

Variety of presentation is achieved by use of the closure technique. The students can be asked to scan Boingage for suitable items to insert in the blank as in the frame, (The) \_\_\_\_\_ is/are good." The morphological signals can be inspected as to their function or as to their form reflected within derivational suffixes and inflectional endings. The concept of denoting the voiced consonant form as ( $Z_1$ ) in distinction to the voiceless consonant form as ( $Z_2$ ) should be included within the discussion.

The shaping and arranging of grammatical syntax upon a kernel sentence form eliminates an unnecessary and confusing step undertaken in traditional diagramming. Once a student has mastered the basic linear-constructed pattern of the kernel sentence, he merely restructures the problem sentence and substitutes the lexical elements of the new sentence for the equivalent function form words as strung out in the basic sentence pattern. In the cold system, the student was confronted with blank lines running off in all directions- a visual spider which contained no direct clue to the function words which were

to be written within the nooks and crannies of this visual puzzle.

In view of the rather slow conversion of text book publishers to new concepts of language analysis, there are, nevertheless, some well-constructed texts reflecting current transformational techniques. Directed toward the third-grade level, Loy and Grimm in Elementary School English, introduce the concept of noun phrase and verb phrase through an illustration of a severed toothbrush. The caption for the bristle and handle portion of the dissected toothbrush asks whether or not the illustrated section is a toothbrush. Then, the text comments, "Here is something else that has two parts: 'The antelopes leap gracefully.'"<sup>28</sup> The chapter is introduced: "This chapter will be about the two parts of English sentences."<sup>29</sup> The chapter confines itself to discussion of sentences that are alike structurally in that they all have two parts, a first part and a second part. The learning activities are varied. One exercise enlists matching columns urging the child to match noun phrases with verbal units. The directions for this exercise call for the student to "say the sentences quietly to yourself"<sup>30</sup> giving credence to the backbone of the generative-transformational system which is intuitive judgment. Another

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Artha Sue Loy and Mary A. Grimm, Elementary School English (Menlo-Park: Addison-Wesley Publishing Co., 1968), p. 91.

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Loy and Grimm, p. 91.

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Loy and Grimm, p. 91.

exercise requires the students to separate the grammatical sentences from the non-grammatical, an activity which Noam Chomsky has placed as the first objective of generative grammar.

Anne Kirby in her text, Elementary School English, which is a sequel to Loy and Grimm's textbook states, "A basic sentence consists of two parts--a Noun Phrase followed by a Verb Phrase. The NP functions as subject and the VP functions as predicate."<sup>31</sup> Within her series for the middle grades, the text for the fourth grade describes only the form and not the function of the noun phrase and the verb phrase. The author comments in the Teacher's Edition of the text, "The description admittedly is not a complete one but it enables students to construct sentences consciously and to explain what they do unconsciously as speakers of English."<sup>32</sup>

The following chart depicts the author's schema for delineating the NP and VP and should prove of help to teachers attempting to adapt complicated theoretical descriptions of these formations to the level of the elementary school. Those items marked with an asterisk are introduced within the fourth-grade text:

NOUN PHRASE	*determiner plus noun (the boy)
	personal pronoun (she)
	determiner plus proper noun (my dad, Jim)
	indefinite pronoun (someone)
	determiner-pronoun (all)
VERB PHRASE	*tense plus verb (called)
	tense plus verb plus NP (ate the grass)
	tense plus verb plus adj. (look happy)
	tense plus BE plus adv. of place (is here)
	*tense plus BE plus adj. (was happy)
	tense plus BE plus NP (were sailors)

<sup>31</sup> Anne Kirby, Elementary School English, Grades 4-6 (Teacher's Ed.) (Palo-Alto: Addison-Wesley Publishing Co., 1967), p. 23.

<sup>32</sup> Kirby, p. 23.

Kirby devised the following rules for dealing with the noun phrase and verb phrase:

1. Basic sentences contain no modifiers in the NP.
2. "Be" is given its own name and described separately from verbs.
3. Adverbials occur as modifiers in the VP but always optionally, except for an adverbial of place after "Be".
4. Any or all of the following elements are optional in the VP:  
 modals (can, may must, shall, will)  
 have + en (past participle)  
 Be + ing (present participle).<sup>33</sup>

The underlying linguistic structure of certain words in a certain order is approached in terms of encoder expectation as to the decoder's response. "Ever since you learned to talk, you've known that 'help yourself to the cookies' doesn't expect the same sort of response as 'did you help yourself to the cookies'".<sup>34</sup> One utterance is a reaction to another utterance or series of utterances and in turn, shapes to a greater or lesser extent, further utterances until the encoder and decoder feel that the communication cycle is complete.

In conjunction with the idea of expectation and reaction, the writer of this dissertation proposes that one test of whether or not an utterance is a sentence can be evolved from the concept of an utterance being a sentence if the utterance can meet the expectation of having conveyed a closure bit of information. Although a sentence can be close-ended such as "We find the defendant guilty", a sentence form can also serve to evoke more questions than it answers. Nevertheless, within the information provided by the utterance, the bit of information conveyed must be sufficient to block out alternative

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<sup>33</sup>Kirby, p. 23.

<sup>34</sup>Kirby, p. 23.

interpretations in at least one dimension. In other words, the communication chain can advance bit by bit. If the question is asked, "Is the ball yellow, red or green", the response, "The ball is not yellow" would qualify as a sentence since although it has not selected one item from the three choices, it has, nevertheless, eliminated a choice. Thus, another statement of elimination would be needed in order to finally resolve the question. While a decoder might respond to the utterance with a further question or declaration, the utterance may still be considered a sentence unless the decoder responds with the same question or asks for the same information supposedly furnished by the utterance. (Rhetorical questions which echo the question asked such as in the situation--"Who likes television?" evoking the response "Who likes television!" is the possible exception.) Thus, the words, "right here", if used as a locative phrase in response to an inquiry soliciting the location of a certain object, can be considered a sentence-unit if within a certain context, the words convey the specific bit of information needed to ferret out the object's location from all other possible locations. The locative prepositional phrase, "in the bag" could also serve within a specific dialogue as a complete sentence unit. However, such a phrase used to initiate a conversation could not stand alone as a complete sentence.

Practice of basic sentence patterns and investigation of the construction of sentences can be accomplished by adaptations of oral grammar drills such as are commonly practiced in the teaching English as a second language. In his article, "Oral Grammar Drills," Harold V. King describes three major types of drill. The simplest type employs a sample sentence: "The sentence is simply

repeated over and over with a slight variation in vocabulary content."<sup>35</sup> Working with kernel sentences, the teacher might devise a basic form for the representation of countable nouns. The sentence may be, "I want a little more sugar!" This would be followed by sentences containing countable nouns patterned after the original sentence such as "I have a few more pennies." The second type of drill is called "Progressive Pattern Practice." It is a variation of the first type requiring the student to decide which of three or four different positions or slots in the sentence will accommodate the given word. "In effect, he must know the syntactical class to which the word belongs."<sup>36</sup> Thus, "Mary wrote him a letter" would be followed by "Mary wrote them a letter," etc. The final type is called "Substitution-concord Drill". This kind of drill emphasizes morpheme correspondence especially of the  $Z_1 Z_2$  type. This drill is effective in practicing the irregular verbs.

With the mastery of the basic sentence forms, added complexity can be introduced in the form of more involved rules of operation. Through the study of syntactic rules, the student is able to fathom the relation of conceptual structures with surface structures. Langacker states, "The function of syntactic rules is to link conceptual structures with surface structures."<sup>37</sup>

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Harold King in Readings in Applied English Linguistics edited by Harold B. Allen (New York: Appleton-Century-Crofts, 1964), p. 191.

36

King, p. 192.

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Langacker, p. 97.

Previously, it has been noted that a sentence can be segmented into a series of morphemes. Langacker emphasizes that "The morphemes of a sentence are not randomly arranged but are combined in a very specific way to form a surface structure."<sup>38</sup> The configuration of surface structures pertains to their linear arrangement, their hierarchical arrangement and the units of which they are composed.

The linear ordering of the morphemes is immediately visible and straightforward. For instance, in the string, "The boy is happy" (pattern 1 sentence), "the" precedes "boy". "Boy" precedes "is" and so on. If the order of morphemes were to be changed, either an ungrammatical sentence would result or an entirely new sentence would be generated. The hierarchical arrangement of a sentence occurs because certain words within the sentence form closer bonds with a few elements among the many sentence elements. For example, the structuring which results from grouping the sentence elements into nominal phrase and verbal phrase causes a hierarchy to begin.

In his explanation of such an arrangement, Langacker uses the string, "The cat scratched the dog". He uses the linear arrangement in incorporating the sign for the tense of the verb. Thus, he writes "the cat scratch PAST the dog." Then he offers this explanation of the hierarchical structure: "the morphemes of 'The cat scratched the dog' cohere to form larger units. 'The' and 'cat' function as a group in some sense, whereas PAST and 'the' in no way stand apart from the rest of the string as a unit."<sup>39</sup> (This is not strictly true since "the" relates as a definite article to a noun in both

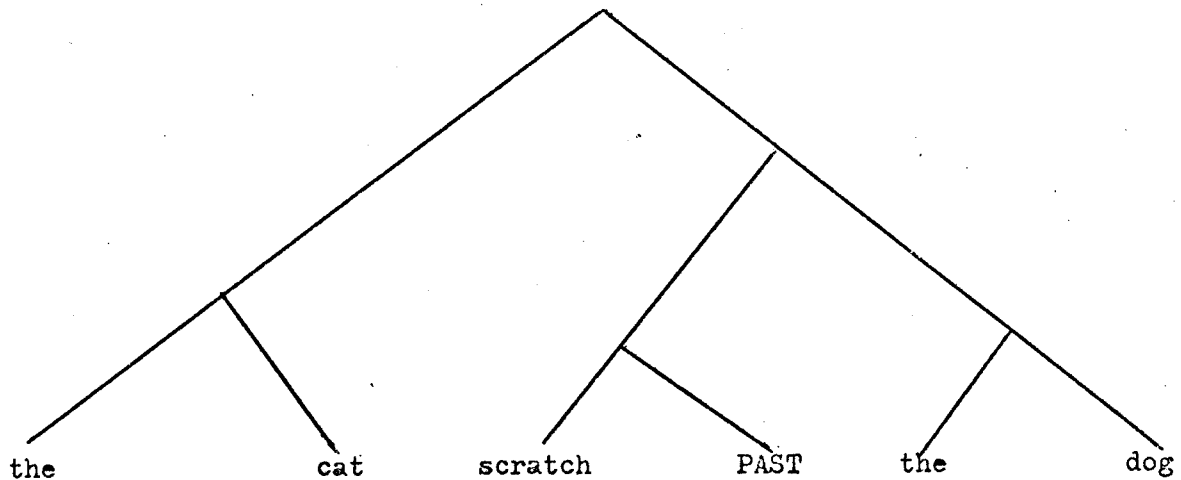
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<sup>38</sup> Langacker, p. 97.

<sup>39</sup> Langacker, p. 98

"the cat" and "the dog") A string of morphemes such as Langacker has described constitutes a unit called a "constituent". With regard to his sample string, Langacker concludes that "the + cat" is a constituent of the sentence string whereas "PAST + the" are not.

Langacker makes a point of relating that the entire string is also a constituent since it constitutes as a whole, a unit termed, a "sentence". He goes on to show how this string can be broken into smaller constituencies "the + cat" and "scratch " the " dog "which in turn has the constituents, "scratch + Past" and "the + dog". In the final resolution, each morpheme can be considered to be a constituent. The tree structure serves as a visual aid in comprehending the rather wordy description given above:





The tree diagram shows that certain morphemes belong together to form constituencies, while excluding other morpheme sequences. The tree structure does not tell what type of constituent a given sequence represents. Thus, standard practice in tree diagram notation conveys this information through the use of abbreviated labels based upon functional descriptions of the particular word or morpheme. Here is a typical key:

<u>Label</u>	<u>Sentence Function</u>
S	sentence
N	noun
V	verb
ART	article
*NP	noun phrase
*VP	verb phrase
ADJ	adjective
P	preposition
PP	preposition plus a noun phrase

As the rules become more complex, the sentences generated by the rules expand into more complex forms. The next chapter of the dissertation seeks to advance the study of sentence-formation in terms of transforms and other expansions. However, as Richard Gunter observes, "The whole idea of transformation-generation in grammar can be stated this way: the grammarian tries to discover that small number of core sentences in the language which he can use as raw material to build all the other sentences of the language."<sup>40</sup>

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Richard Gunter, Readings in Applied English Linguistics, Edited by Harold Allen (New York: Appleton-Century-Crofts, 1964), p. 201.

## CHAPTER SIX

## ELABORATION AND TRANSFORMATION TECHNIQUES

Since rules can be so stated and arranged as to produce an infinite number of strings, teachers must guide their students to discover the real relationships among correlatives. Richard Gunter contrasts the position of the theoreticians with that of the classroom teacher. "In exploiting the potential of transformation, the theoretician's role is discovery of the mechanical rules by which one sentence can be transformed into another."<sup>1</sup> Contrasting this role is that of the teacher who must adapt the transformational-generative principle as a teaching device, "since many of the transforms, or formal correlatives, are also the true correlatives."<sup>2</sup> The teacher must search for general sentences "that have a special status, sentences for which we native speakers substitute forms that, from the generative point of view, are quite unexpected."<sup>3</sup>

The teacher of English would do well to concentrate upon those transformations that reorder the elements of the core sentence, those transformations that delete elements and those transformations that add two or more examples of the core sentence or parts of core sentences to produce more complex structures. Gunter observes that, "The various forms of a core sentence that we can derive through a series of transformations may be considered as a sort of paradigm, much like the paradigm of a verb."<sup>4</sup> He cautions that while a

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<sup>1</sup>Gunter, p. 205

<sup>2</sup>Gunter, p. 201.

<sup>3</sup>Gunter, p. 201.

<sup>4</sup>Gunter, p. 202.

grammatically well-formed paradigm can be derived from stringent rule application, some of the forms generated are formally correct but at the same time, not true to typical or current usage patterns. The teacher should point out those expressions which need to be reworded for the sake of style although they are grammatically correct. Applying rules for negative transform to the string "The man must see the boy" would produce the string, "The man mustn't see the boy" which is a rather archaic form. The teacher should suggest a rephrasing based on current usage. The transformationalist is equipped with a battery of rules which when properly applied will generate grammatical sentences. "He is not interested in whether a given form is the true correlative of some other."<sup>5</sup> In the words of Chomsky recorded within his Syntactic Structures, "The fundamental aim in the linguistic analysis of a language L is the separate the grammatical sequences which are the sentences of L from the ungrammatical sequences which are not sentences of L....."<sup>6</sup>

Teachers must go beyond the question of which are grammatical utterances and which are not. Teachers cannot ignore the stylistic elements within sentence encoding. In addition to teaching the students the negative forms, the passive forms and the like, teachers must give the students a sense of appropriateness in the use of these forms. A dullard's ceaseless repetition of transformations can insure grammaticality. Yet, this is not enough if

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<sup>5</sup>

Gunter, p. 203.

<sup>6</sup>

Noam Chomsky, excerpt from Syntactic Structures in Language and Thought edited by Donald Hildum, p. 91.

creative writers or thinkers are to be nurtured. The student must be able to translate his thoughts in an acceptable, interesting style.

Transformational analysis is a method of discovering the nuances and shades of the language. Teachers need only exercise their imagination in formulating rules and sets of rules to delineate finer points of grammar and style. An approach in this direction is offered by Charles Fries who generated three formulas of constructions to illustrate "have" as a function word. He was concerned with the traditional treatment of this word within the confines of the meaning "to possess or to own".

The first formula which Fries developed for expressing the syntactic function of "have" is stated as: 1) have + to + infinitive (or simple form of verb)<sup>7</sup> This formula generates "have" as expressing necessity or obligation. For example, "The men have to work hard." If the order is shifted such that "That have to tell a story" becomes "They have a story to tell", the meaning of "have" reverts to the commonly-cited definition of "to possess".

The second formula encompasses two versions. 2a.) have+ N<sup>1</sup> + infinitive (or simple form of verb) expresses a directive or a causative.<sup>8</sup> A sample sentence is "They have their boy do the actual work." This meaning regularly attaches to "have" without the use of "to". When the "to" does occur before the infinitive, the word "have" usually have some one of the full word meanings.

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Charles C. Fries, "Have as a Function Word" in Teaching English as a Second Language edited by Harold Allen (New York: McGraw-Hill Book Co., 1965),

p. 170.

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Fries, p. 171.

In support of his point, Fries presents the following contrastive sentence patterns: "The manager had his clerk count the tickets" and "The manager had his clerks to count the tickets."<sup>9</sup> The second version of this formula is stated: have + N + "past participle".<sup>10</sup> This expresses a directive or causative "with the unmarked infinitive as in (a) the N is the performer of the act; with the past participle as in (b) the N is the goal or the receiver of the act."<sup>11</sup> The examples given are: "They have a story told each evening" and "The manager had the tickets counted by his clerks."

The third and final formula to exhibit "have" as a function word is stated as: 3) have + "past participle" expresses completed action.<sup>12</sup> An example is "They have told a story each evening." This use of "have" is limited or confined to the situation depicted in the formula.

In an article written for Writer's Digest, Vern Sneider, a professional writer, described how a former English teacher of his showed him step-by-step how to string adjectives into the sentence. The article presented the quite universal problem posed by the student's first attempts to arrange adjectives within a composition. To counteract the apparently natural tendency of stringing or stock-piling adjectives, five sets of adjectival treatment were prescribed for the sake of variety.

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Fries, p. 171.

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Fries, p. 171.

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Fries, p. 171.

12

Fries, p. 172

Although Sneider indicates many of the necessary transforms, he does not translate the steps into standard transformational rule symbols. Thus, the writer of this paper will present standard-form rewrite rules along with Sneider's version of the transforms. The adjectival range of positioning is circumscribed as:

1. Adjective with prepositional phrase (Adj. + PP)
2. Relative Pronoun and verbs understood (R Pro + V)
3. Participial phrases (Part. P.)
4. Absolute phrases (Ab. P.)
5. The ablative absolute (AA)

Rule 1. Adj. + PP

PP = on the town  
beyond the blue horizon  
underneath the lamp post

- Steps:
1. Take a descriptive adjective (Des.) Adj.
  2. Combine it with a prepositional phrase + PP
  3. Place it near the noun it modifies arrow  $N^{mod}$ .

This, then becomes an embedding operation. The adjective with prepositional phrase can be inserted before the subject of the sentence or between the subject and the verb or after the noun object of the sentence. For example,

Maria (S), heavy with child, Adj. + PP, came (V) from the church.

Heavy with child (Adj. " PP), Maria (S) came from the church (VP)

A sub-set of the above rule can be easily manufactured: Adj. + Adj. + PP which results in sentences such as these:

Pale and heavy with child, Maria came from church.

Maria, pale and heavy with child, came from church.

Sneider writes "Pursuing the idea of experimenting with sentence choreography, a writer may use a series of adjectives with prepositional phrases."<sup>13</sup> Thus, the rewrite rule of Adj. + Adj...(S) is evolved. A sample sentence generated by this rule is: "It was an island, green with cocoanut palms, lush with tropical verdure, but dank with decaying vegetation."

Finally, Sneider suggests a single adjective with two prepositional phrases: Adj. + PP + PP which yields the following sentence:

"Tall with broad shoulders and with a narrow waist, he was the professional athlete personified."

Rule 2. (R) Pro. + (V)

Transforms:	who	people
	which	things
	that	people and things

A clause is defined as "a group of words containing a subject and predicate, but which cannot stand alone."<sup>14</sup>

Transform: Clause + subject and predicate  
Cl + S + Pred.

Clauses such as these can modify nouns or in other words, they can function as adjectives.

- Steps:
1. Put the relative clause close to the word it modifies.
  2. Cross out the relative pronoun.
  3. Cross out the verb or verb phrase of the clause.

This rule then takes on the nature of a deletion process.

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<sup>13</sup>

Vern Sneider, "The Adjectival Idea," Writer's Digest, XXXIX (August, 1969), 44.

<sup>14</sup>

Sneider, p. 45.

Delete-(Rel. Pro.) + VP of Cl.

Substitute (rel) Cl.

Sample sentences are "Babe Ruth, who was called the Sultan of Swat, played outfield for the Yankees" and "Babe Ruth, (who was called) the Sultan of Swat, played outfield for the Yankees." In the next example, the relative clause modifies the predicate complements or direct objects rather than the subject: "It was an island, (that was) unimportant except to its inhabitants."

Rule 3. Part. P. "A participle is a verb used as an adjective."<sup>15</sup>

Operations: a. Pres. Part.  $\neq$  V + ing

b. Past Part.  $\neq$  3rd P. Part. of the V

Morphological Rules: Past P. = ed, n, ng

c. Per P. (having or having been) + Past P.

Pres. P. or Past P. or Per. P. + (X) words often are inserted before (S) to yield:

Having (Per.P.) + completed (Past. P.) four years of college (4 words), Harry (S) went on (VP) to get a Master's degree.

Occasionally, the Part. P. may appear as the last sentence element:

Harry (S) went on to graduate school, + having (Per. P) + completed (Past P.) his bachelor's degree. (three words)

Oftentimes, the Part. P. is inserted between the subject (S) and the rest of the sentence. This results in:

Harry, (s) + having (Per. P) + completed (Past P.) + four years of college (four words), went on (VP) to get his Master's degree.



Of course, stylistic considerations of emphasis and rhythm determine the placement of the participial phrase within the sentence. Snieder observes "Invariably, the participial phrase is set off by commas."<sup>16</sup> A non-restrictive clause (NR Cl) is set off by commas or a comma whereas a restrictive clause (R Cl) is not. This rule may be formulated: NR Cl = , clause (,)

R Cl +  $\emptyset$  clause  $\emptyset$

Application of this formula affords a new opportunity to unearth the causes and prevention of that well-known sentence disorder- the dangling modifier. If we posit as a rule that the agent (the who performing the action) must be the same as the subject, the dangling participle will not occur. Observe the string: "Walking down the street, the building rose before me." The particular placement of the participial phrase conforms to that indicated within the first form of Rule 3 wherein the participial phrase begins the sentence: Pres. P. + (X) words + S (N) + VP + (Prep. Phrase) or (Obj.). The string can be indentified as ungrammatical in terms of a dangling participle since 'building' cannot be considered an active agent subject and since, in addition, "rose before me" is a passive construction.

Rule 4. Abs. P.

Abs. P. = Prep. + Prep. Phrase

Transform: Delete Prep.

Abs. P. =  $\emptyset$  Prep. + Prep. Phrase

Norman Stageberg offers two additional rules for generating the absolute phrase or appositive adjectival:

1. Abs. P. = NP or N
2. NP + Abs. PP.<sup>17</sup>

Sample sentences are:

John (S), (with) a stick in his hand, pushed open the door and entered the room.

General Custer (S or NP), (with) his saber drawn and (with) his blond hair flying, charged into the Cavalry.

This latter example requires a double deletion of the preposition.

An interesting corollary appears as a footnote in Stageberg:

"Occasionally an appositive occurs in a position other than after a noun or noun cluster, eg., "That was what he wanted, a riding horse." Another example is "A promising lad of eighteen, Harry was soon a favorite among his classmates."<sup>18</sup>

Basic sentence: (X) Name wants a horse to ride.

Pro. N.<sub>m</sub> - N substitution (m = masculine gender)

Pro. (S) + wanted (V) + horse (N<sup>2</sup>) + to ride (Infia.)

Rule: Infinitives = infinitive introductory word = to + V(Pres.)

This could be considered a "Transform Infinitive" which can be accomplished through use of Rule 3 : "Pres. Part  $\neq$  V + ing  
(ride) + ing

Of course, greater precision would dictate a sub-rule within the morphological system directing that when the verb ends in a consonant, the "ing" may be directly inserted but when the verb terminates in a vowel form the vowel is dropped before the "ing" is added. Thus, Morphological rule 1: Pres. Part.  $\neq$  Vc + ing and Morphological rule 2: Pres. Part.  $\neq$  V<sub>v</sub> Del. Vowel + ing

<sup>17</sup> Norman Stageberg, p. 253.

<sup>18</sup> Stageberg, p. 254.

Thus, working with the phrase "riding horse", rule M2 must be invoked which yields, "riding" rather than "rideing." We have, at this point, now rewritten the basic sentence to read: "He wants a riding horse." However, the tense in the given sentence is past whereas our verb is present tense. Thus, we have need of a transform rule such as: Past Tense Pres. + ed (for regular verbs). We can now rewrite the string to yield, "He wanted a riding horse."

From a list of apositive words, we may select, "that". In order to position the appositive in the position allotted within the given sentence, we may evoke one of the choices for position of appositives; that of preceding the subject and occuring in a position other than after a noun or noun cluster. Condition or description of state can be stated as: App.  $\neq$  following a N or NP designated "-N App." The rule would be: -N app. = + App. + VP + comma + Pres. P. + N<sup>2</sup>. The only other place a N app. could appear or be inserted is in a position preceding the subject noun of the main clause: "A promising lad of eighteen, Harry was soon a favorite among his classmates." Thus, another corollary would be written as:

(Mod.) + app. " (prep. + prep. obj.) + comma + S + VP + Obj. + Obj.

Compl.

It is important that each student work through these exercises. He should be held responsible for locating sentences from novels or short stories which illustrate the various patterns. As the student becomes well-acquainted with the patterns, he must apply them to his own writing to enrich his style.

The final rule given by Vern Sneider concerns the ablative absolute.

Rule 5.  $A A = N + \text{Part}$ . This is a rather simple rule since "In reality, what you have here is a participle being an adjective to the noun."<sup>19</sup>

Ablative means "removed" and the noun is removed grammatically from the main clause. Since a pronoun may, in certain cases, be substituted for the noun, a corollary might be simply, " $A A = \text{Pro.} + \text{Part}$ " or, the transform:  $\text{Noun} = \text{Pro.}$  could be employed. A bit of caution is in order concerning the use of the pronoun for the absolute. Oftentimes, the pronoun is redundant and thereby, creates an awkward sentence structure: "He being a good boy, his mother seldom scolded him." Or, the equally poor, "It being a sleepy town, the inhabitants went elsewhere for entertainment."

Up to this juncture, transformational-generative approach to language learning had been considered largely in terms of encoding the language as applicable to composition work or grammatical analysis. However, the application of transformational analysis to the decoding operation involved in the resolution of structural ambiguities and other stylistic component problems is beneficial. Based upon the discussion in these last two chapters, a fundamental assumption of transformational grammar may be derived: the possible sentences of English are either kernel sentences or in effect, one or more of the these-rearrangements of kernel sentences, additions to kernel sentences, deletions from kernel sentences and/ or combinations of kernel sentences.

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Sneider, p. 47.

Richard Young and Alton Becker, in their article, "Toward a Modern Theory of Rhetoric," warn linguists who venture beyond the confines of sentence analysis that these linguists will have to face up to problems heretofore reserved to the arena of rhetorical analysis. "The description of the structure of a sentence and the description of the structure of an expository paragraph, extended argument, or a novel are not sharply different kinds of activity, for all involve selecting and ordering language in a significant way."<sup>20</sup> The authors feel that within the analysis of longer discourse, the traditional separation of grammar, logic, rhetoric and poetics begins to break down. An application of linguistics toward this end is illustrated in the dissertation, A Linguistic Analysis of the Prose Style of Edward Gibbon, prepared by Curtis Hayes. The work of Hayes demonstrates the underlying principle of binary opposition in our language construction.

Joseph Greenberg enlarges upon this concept of binary structure. He conceives of the typical sentence as consisting of a subject related to an attribute in such a manner as to associate with the attribute partially or fully or to disassociate from the attribute. Greenberg classifies attributes as predicates, comparative concepts and numerical concepts. The first class, that of predicates, is particularly pertinent within the logical-proposition or binary schema. "Predicates are attributes whose presence in a given individual statement is susceptible of a yes-no answer."<sup>21</sup>

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Richard Young and Alton Becker in Language and Learning, p. 202.

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Joseph Greenberg in Current Trends in Linguistics, Vol. III edited by Thomas Sebeok (The Hague: Mouton & Co., 1966), p. 69.

In terms of logic, it is of a predicate form in such a statement as "X is red". Often, a number of predicates refer to the same attribute as for example, skin color within the early Blumenbach theory which classified races in black, brown, red, yellow and white. Greenberg states that "These are always logically restateable as choices between black and non-black; brown and non-brown; etc. It is this restatability which provides the logical basis for the contention that all linguistic predicates are binary."<sup>22</sup>

Greenberg cites the form, "X is -er than y" as a comparative concept. Since a comparative concept contains two variables, it is a relation. Such a concept gives occasion for the serial order rather than a segregation into mutually exclusive classes. The function of a numerical concept is to assign to each individual a number as an expression of the degree to which the individual is endowed with the attributes. An example would be the translation of a person's weight into a specific number of pounds.

The author shows that a distinction can be drawn in terms of formal logical modes or categories and operational modes found in ordinary discourse and literature. "In formal comparison, a particular attribute is defined and the individuals (members) are assigned to the class depending on whether they have the attributes or not"<sup>23</sup> in a very straight-forward manner. However, to compare processually, formal coincidence in the properties used as criteria is not demanded. It is necessary only that they be similar. "The process of discovering and reformulating in a more precise form the underlying attribute structuring has been called substruction."<sup>24</sup> Greenberg acknowledges that this

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<sup>22</sup>

Greenberg, p. 69.

<sup>23</sup>

Greenberg, p. 70.

<sup>24</sup>

Greenberg, p. 71.

term has been used in a phonological sense by Lazarfield in 1937 and later by A. Barton in The Concept of Property Space in the Language of Social Research published by the Glenco Press in 1955. Thus, it can be observed that selection and linear rearrangement can result in the reordering and rewriting necessary for a transformational analysis of discourse considered as a unit extending beyond the simple sentence utterance.

The author of this dissertation feels that advances in transformational theory definitely permit the analysis of structures beyond the unit of the sentence utterance. She has devised her own analysis format for the interpretation of the poem, "West of Your City" by William Stafford. A reference key for the analysis of the poem is provided by Goodman's synopsis of transform patterning.<sup>25</sup> A transformation may perform one or more of the following functions:

- a. It may rearrange elements in a string.

Ex. String: NP + V + Adv. = The man walked slowly.  
 Transf.: NP + Adv. + V = The man slowly walked.  
 (Adverb and Verb are rearranged.)

- b. It may add elements to a string.

Ex. String: NP<sub>1</sub> + V " NP<sub>2</sub> = The man hit the ball.  
 Transf. NP<sub>1</sub> + be + V<sub>2</sub> + by + NP<sub>1</sub>  
 (Be and by are added; also, the NP's are rearranged.)

- c. It may delete elements.

Ex. String: You + will + V = You will go.  
 Transf.: V + Go  
 (You and will are deleted.)

- s. It may "combine" two or more strings.

Ex. String: 1. NP<sub>1</sub> + V<sub>1</sub> = John walks.  
 2. NP<sub>1</sub> + V<sub>2</sub> = John giggles.

<sup>25</sup>Ralph Goodman, "Transformational Grammar" in Stageberg, An Introductory English Grammar, p. 348-349.

Trans.:  $NP_1 + \text{who} + V_2 + V_1 = \text{John, who giggles, walks.}$

(Strings 1 and 2 are combined; NP of string 2 is deleted;  
"who" is added to replace  $NP_1$  of string 2.)

Ex. String: 1.  $NP + V = \text{John knows.}$

2.  $S = \text{The world is round}$

Transf.:  $NP + V + \text{that} + S = \text{John knows that the world is round.}$

(Strings 1 and 2 are combined; "that" is added.)

This is the text of "West of Your City" as it appears in The Distinctive Voice compiled by William Martz.:<sup>26</sup>

West of your city into the fern  
sympathy, sympathy rolls the train  
all through the night on a lateral line  
where the shape of game fish tapers down  
from a reach where cougar paws touch water.

Corn that the starving Indians held  
all through moons of cold for seed  
and then they lost in stony ground  
the gods told them to plant it in-  
west of your city that corn still lies.

Cocked in that land tactile as leaves  
wild things wait crouched in those valleys  
west of your city outside your lives  
in the ultimate wind, the whole land's wave.  
Come west and see; touch these leaves.

The poem will be analyzed through transformation technique.

1. Your city is west. (Predicate- Is your city west? No sequitur sequence. Nothing added or deleted to this sentence. No real subject in this first line. Therefore, it serves as a setting or introduction.)

2. Sympathy rolls the train. Kernel pattern: The man hit the ball.

$N_1 + V + NP_2$

3. The train rolls west of your city. In this sentence configuration, the location of the city (west) can be interpreted as a disassociative element.

Hence, combining the two strings, we rewrite:

<sup>26</sup>William Stafford, "West of Your City," in The Distinctive Voice edited by William Martz (Chicago: Scott, Foresman & Co., 1966), p. 191.



Sympathy rolls the train west of your city.

Or, if we consider both sympathy and train to the items fitting the requirements of  $N_1$ , we arrive at:

$N_1$  (Sympathy, train) + V (rolls) + Adv. P. (west of your city.)

The interpretation of the adverb of location-"west"- in the phrase, "west of your city" as serving a disjunctive or disassociative element seems justified by referral to the final line of the poem: "Come west and see; touch these leaves."

4. Come west and see. Applying rule (d) of Goodman, we write:

- a. You go west.
- b. You see.

Notice, that "your city" now becomes more personally focused upon the reader into the second person imperative transform: "You come west and see." The final line of the poem seeks to embroil the reader into the difficulties of the old west.

The next string would seem to revolve around the verb ( $V_1$ ): rolls.

5.  $N_1$  + V + Adv. T yields, "The train or sympathy rolls all through the night."

combined with the string:

$N_1$  + V " Adv. Loc. "The train or sympathy rolls on a lateral line."

6. Mountains circumscribe the lateral line.

The "mountains" are suggested by the visual imagery of the poem, although the word is not actually used in the poem. "Reach is suggestive of the mountain and represents mountain much the same as sympathy represents an engine of the train.

In the last two lines of the poem, new  $N_1$  items appear: The shape of game fish and cougar paws. "Reach" appears only within the object slot or as the locative complement to the preposition, "from". Note that in the poem, "reach" is used only once, and yet the two last strings of the verse pivot around this word. Thus rule (d) of Goodman is again invoked:

7. String:  $NP_1 + V + Adv. Loc. Phrase_1$

Cougar paws touch water from a reach.

The shape of game fish tapers down from a reach.

The parallelism of structure within the poem is maintained throughout all three verses. The title of the poem and the lines of the poem repeat "West of Your City". The line serves to maintain aesthetic distance in that the happenings occur west of the reader's environment. Although "west of your city" begins the first stanza, this same line ends the second and final stanzas. It seems fitting in terms of thematic development that this line begins and ends the poem. The symmetry established within the first verse wherein a sequence of noun phrases flowed one into the other is lost in the second section of the poem. The second stanza revolves about the word "corn".

8. The string: "Corn that the starving Indians held" must be rewritten. The use of process (d) creates: The Indians are starving." Application of the active-passive transform yields: "The Indians held corn."

The string, "The Indians held corn" is represented as  $NP_1 + V + N_2$ .

The Adverbial Phrase is added to yield:

The Indians held corn all through moons of cold.

$NP_1 + V + N_2 + Adv. P. (Time)$

The Indians held corn for seed.  
 $NP_1 + V + N_2 + Adv. P. (Purpose)$

They lost. (Substitute  $Pro_1$  for  $NP_1$  for  $Pro_1 + V_{int.}$ )

They lost in stony ground.  
 $Pro_1 + V + Adv. P. (Loc.)_1$  (in stony ground, west of city)

The gods told them to plant in stony ground.  
 $NP_1 + V + Pro_2 + Inf. P. + Adv. P.$

Now a series of deletions reduce the lines to simple kernels.

The deletion of the Adv. P. yields "They plant it."

The string "That corn still lies" must be resolved into "That corn is still" and "That corn lies". In so doing, we can resolve the structural ambiguity of the phrase "That corn still lies" as to, whether the corn lies still in the sense of quietness or whether, the corn continues to lie there as the Indians planted it. "That corn lies still" would be represented as  $NP_1 + V + Adv. of manner or duration$ . This pattern is not in keeping with the simple structure "They plant it". In addition, the phrase can be broken into "That corn lies" and "That corn is still" which would mean that the original string as stated in the poem is composed of at least two basic kernels which seems overly complex in view of the fact that the original string is merely a phrase within the poem. Most likely, the basic pattern is "That corn still lies" with "still" being a part of the Verb Phrase. The structure is actually expanded by the adverbial locative phrase, "west of your city". The thematic tie-in is represented by:

"That corn lies west of your city".

$NP_1 + V + Adv. P. (Loc.)$

9. Leaves are tactile. (Predicate- Are leaves tactile- Yes or No)

Through deletion and rearrangement of the kernel sentence

to N + V + adv. (feeling, the metaphor is formed: "Tactile as leaves".

10. Wild things crouch.

$NP_1 + V_{int.}$

Can be rewritten:

Wild things crouch in those valleys.

$NP_1 + V + Ad. P. (Loc.)$

Combined with:

Wild things cock in that land.

$NP_1 + V ad. P. (Loc.)$

Rule (d.): Wild things crouch in those valleys and cock in that land.

Through use of the Present-Past transform, we rewrite:

Wild things are leaves.

$NP_1 + V + NP_2$

Therefore, wild things are tactile because leaves are tactile in the sense that this basis of similarity- tactile features - allows a metamorphic comparison to be drawn.

11. The rest of the poem can be handled in typical (d) statement form:

a. West of your city is outside your lives.

b. The whole land is wave.

c. The wind is ultimate.

Combining these last two statements which are  $NP_1 + V + NP_2$  patterns, we reach the poem's message of "The whole land is wave in the ultimate wind". In the final line, the poet seeks to establish a tactile bond between the far-off reader and the sufferings of the West:

a. You come west.

$NP + V " Adv. (Loc.)$

b. You touch these leaves.

$NP + V (tac) + NP$

It will have been observed that in the analysis of "West of Your City", several noun forms could substitute within the same slot of  $N_1$ . The analysis showed "sympathy" to be interchangeable with "train". "Sympathy" serves as an implied synecdoche. "Engine" is understood. "Engine" or "sympathy" is a synecdoche for train. "Reach" is also a synecdoche for "The mountainous territory of the Indian." The interchangeability or substitutability within the  $N_1$  slot may offer a new description, therefore, of the metaphoric function. John Waite Bowers in his article, "Some Correlates of Language Intensity," finds a high degree of correlation between intensity and metaphor. The intensity factors are force, repetition and substitutability. "A term was classified as metaphrical whenever it took some effort, however slight, for me to transfer its denotation from that with which the term is conventionally associated to that with which it was associated in the context of the communications."<sup>27</sup> Michael M. Osborn and Douglas Ehninger call this effort, "puzzlement-recoil" in their article, "The Metaphor in Public Address."<sup>28</sup>

The classroom teacher will find additional suggestions for incorporating transformational analysis within stylistics in an article entitled, "Teaching the Analysis of Expository Prose," written by Richard Larson. This author sets up a series of questions to elicit student observations upon an author's

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John W. Bowers, "Some Correlates of Language Intensity," Quarterly Journal of Speech, L (December, 1964), p. 419.

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Michael Osborn and Douglas Ehninger, "The Metaphor in Public Address," Speech Monographs, XXXIX (August, 1962), p. 227.

expository style. Larson provides a check list including such questions as:

Are there any distinctive syntactic patterns or recurrent kinds of phrases that can be called characteristic of the author's writing? Do his diction and idiom seem in any way distinctive? What figures of speech, if any, does he frequently use? To what kind of activity does he look for items to use in metaphors and similes.<sup>29</sup>

Larson cautions that enough examples of distinctive features should be included in order for the sampling to be considered characteristic of an author's style. Transformation systems of analysis, because they probe both surface and deep structures in an attempt to describe the unique structure of each sentence, is at a distinct advantage in supplying answers to these questions. Transformational analysis is not content to rest upon a few scattered examples, but is prepared to analysis an entire corpus sentence-by-sentence.

For example of a fine, sentence-by-sentence type of transformational reconstruction of a literary work, the reader should see The Description of Style: Dr. Johnson and his Critics an unpublished doctoral dissertation submitted by Leo Rockas to the University of Michigan in 1960. Rockas experiments with a linguistic analysis of a prose passage in an effort to discover recurrent patterns in Samuel Johnson's style. He uses Fries' system which assigns a number to each lexical item.

Another source for ideas in adapting transformational analysis to the classroom is Philip Cook's article, "Putting Grammar to Work: The Generative Grammar in the Generative Rhetoric,". As his corpus, Larson examines four

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Richard L. Larson, "Teaching the Analysis of Expository Prose," English Journal, LVII (November, 1968), 1160.

versions of a passage from Mark Twain's Old Times on the Mississippi. He specifically searches for the processes of addition, direction of movement, levels of generality and texture. The first version contains Twain's main clauses devoid of modifiers. The second version admits modifiers within the main clauses and the headwords of added levels. Version three is the finished product of Twain's script. "Version four, the one I consider the key, reduces his passage to kernel form, the form we may hypothesize that the thoughts took in his mind before he transformed them into final form, the form he submitted for publication."<sup>30</sup> Cook claims that this method allows students to see different ways in which Mark Twain could have expanded his kernels. Cook concludes:

We see the base sentence pattern of each kernel for what it is—simply a noun phrase plus a verb phrase. If all possible additions were used, we would be generating rhythmless, overloaded, padded patterns.<sup>31</sup>

Thus, the application of transformation analysis to stylistics demands more than the generation of grammatical sequences as opposed to ungrammatical sequences. The intricate selection and reordering of the sequences must be precisely manipulated.

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<sup>30</sup> Philip H. Cook, "Putting Grammar to Work: The Generative Grammar in the Generative Rhetoric," English Journal, LVII (November, 1968), 1171.

<sup>31</sup> Cook, 1171.

## CHAPTER SEVEN

## A CASE STUDY OF LANGUAGE LEARNING AS A TRANSLATION PROCESS

For the purpose of testing and refining the theory of a translation approach to language learning, Sister Constantine and the writer conducted a six-week summer session. One course was directed to teachers of language arts in the elementary school while the other was directed to secondary school teachers of English. The over-all objective of the courses was the incorporation of linguistic approaches into the curriculum and teaching methods. The combined enrollment for the courses was approximately thirty students. All but three of the students were in-service teachers. The three exceptions were undergraduate students majoring in education.

During the first class meeting, index cards were distributed to each of the students for the purpose of determining their backgrounds. Twenty per cent of the students had either one or two courses in linguistics (either in structural linguistics or in transformational analysis). Those teachers who were over thirty years of age had taken no such courses. The students represented every major dialectal belt within the United States. One student was from the Philippine Islands and spoke Spanish as his native language. Most of the class members had taught in various sections of the country. This diversity of background worked to advantage in those areas of the course which dealt with dialect and usage patterns. The teachers represented a good cross-sectioning of parochial and public schools.

A pre-test was administered following the collection of background data. The test sought to elicit pre-knowledge of terms essential to a study of linguistics. In addition, it was hoped that the test would reveal attitudes



toward language analysis and approaches to teaching.

The terms which the students were asked to identify were:

1.) phoneme, 2.) dialect, 3.) linguistics, 4.) uvula, 5.) IPA, 6.) syntax, 7.) noun, 8.) idiolect, 9.) immediate constituent, 10.) morpheme, 11.) Fries and 12.) Roberts.

Almost every student defined linguistics as a study of language. Many included the term, "objective" or "scientific". Some noted that it represented a new approach to language analysis. Many students deemed it "an oral approach". Only those students having previous training in linguistics were able to identify uvula, IPA, idiolect, immediate constituent and morpheme. Only one student identified the authors, Charles Fries and Paul Roberts. Reflecting the traditional approach to grammar, all students untrained in linguistics, defined a noun as the "name of a person, place or thing." All students identified dialect as a regional or as a local variation of the English language.

The second part of the pre-test was geared to elicit expectations with regard to the application and importance of linguistics to the role of the teacher which each individual had in mind. Quite indirectly, the test sought to discover attitudes toward language and the study of language.

The first three questions required the student to identify his own vocal pattern as to pitch of voice, rate of speaking and quality of voice. For most of the teachers, this seemed to be a difficult series of questions. There was quite a long pause before any of them began to respond to the questions. A few of the students turned in papers which left blanks in that

section. All of the women rated themselves as having average to extremely pleasant voices although later on in the course, it was obvious that several of them had poor voices which were monotonous and poor in vocal quality. The men rated themselves as below average to average although it was later decided by the group that the men with one or two exceptions, had very fine speaking voices. The lack of accurate judgment on the part of the teachers with regard to their own voices confirmed my contention that, in too many cases, teachers of the language arts do not consider themselves as encoding models for children except in a limited sense as in the careful enunciation of spelling words or in the avoidance of gross grammatical errors. Thus, part of the linguistics training must prepare teachers to deal with the "hidden curriculum" in language learning. They must face up to the fact that their constant word barrage upon the ears of the students does influence the language pattern of the students.

The next question asked the teachers to distinguish between the inductive and deductive approaches to teaching. They were to tell which they preferred to use and the reason for their choice. In general, the teachers thought that the inductive approach was better because it proved "more interesting to the students". It "made them think" and it "lent variety". However, many of these same teachers did not use the inductive approach because "it was too difficult" or "they did not feel competent".

The following question sought their ideas as to how they felt linguistics could help them in their teaching. Only three teachers mentioned that the study of linguistics could help them improve their own speaking habits. Many

of the teachers indicated interest in linguistics as a new approach to the analysis of grammatical structure. A few secondary teachers thought that linguistics could be of assistance in the analysis of poetry. Teachers who taught in inner-city schools looked to linguistics as a way of broaching the phonetic-phonemic barrier created by a secondary-language background.

Many teachers felt that they had only a superficial knowledge of English language structure and hoped that linguistics would provide a systematic approach to the study of English. Evidence gathered in support of this feeling will be discussed subsequently.

The next question was closely related and concerned personal objectives. The majority of the class indicated a need for self-confidence. Many indicated a need to keep up in the language arts field. Some felt their teaching had become stagnant.

This next question elicited pet peeves. The peeves ranged from no pet peeves to distaste for lazy pronunciation, poor articulation and the use of "ain't". Most of the peeves centered around usage items. Oddly enough, those teachers who had the most pet peeves regarding language encoding were the poorest of the teachers in terms of their own language encoding. They were, however, largely unaware of their language habits at the beginning of the course.

The following question asked whether the teacher spoke in dialect and if so, would he describe it. Not one student answered to the effect that every speaker of English is a speaker of dialect. Many teachers answered, "I don't know." Some declared flatly that they had no dialect and a few had always avoided speaking in dialectal patterns.

The tenth question proved insufferable to most of the teachers. They were asked to analyze, as completely as possible, the following sentence: "There, that's the one who gave me all that trouble yesterday standing out in the hall." Not a single teacher attempted an immediate constituent analysis or a transformational analysis despite the fact that several of the group were currently teaching their students such analytical patterns. When the investigator later expressed surprise that these students did not attempt such an analysis, they replied that they lacked confidence and reverted to the way they had been taught in school. As a whole, the class performed poorly. A few teachers did not successfully identify the subject and verb of the sentence. Only two of the students detected the ambiguity of structure that the sentence presents. Most of the papers reflected an upper-level elementary grade competence. During the exercise, many looked bored and frustrated.

Although the sample of teachers was small, it was interesting to discover that the survey as to academic preparation closely reflected that of English language teachers reported in other studies. For instance, a 1964 survey conducted by the National Council of Teachers of English cited that only half of the secondary teachers considered themselves well prepared to teach literature; slightly more than one-third to teach composition; slightly more than one-half to teach the English language and fewer than one-third to teach oral skills.<sup>1</sup> Deficiencies in academic background as reported

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<sup>1</sup>Committee on National Interest of the National Council of Teachers of English. The National Interest and the Continuing Education of Teachers of English, (Champaign: N.C.T.E., 1964), p. 5-6.

by John Heissler, in "The teaching of English in Grades Seven, Eight, and Nine in the State of Illinois," led to the conclusion that:

...the preparatory curriculum for prospective English teachers for grades seven, eight and nine should include courses in the teaching of composition, advanced composition, the teaching of reading...and courses in grammar, the history of the English language and other related courses in linguistics.<sup>2</sup>

Joan Harris in her "Report on the Teaching of English in Illinois Public High Schools," concludes that"...in the preparation of prospective secondary school English teachers there is a need for more courses in grammar, the English language and writing geared to high school teaching."<sup>3</sup>

Since the hypothesis of the translation approach is that the student serve as both encoder and decoder of his own language system as well as a decoder of the language systems of others, the teachers enrolled in the course were led to approach language coding inductively, relying heavily upon auditory and kinesthetic clues in the translation process. The teaching method which the investigator employed was an attempt to simulate the conditions of language learning which were present in the experiences undergone by their respective students. As much as possible, the teacher was to be treated to a child's eye view of the need for approval, peer group influence and a need to learn a new language code.

Due to the lack of confidence on the part of the teachers regarding their

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John Heissler, "The Teaching of English in Grades Seven, Eight, and Nine in the State of Illinois," in Current Research in English Teacher Preparation: A First Report edited by Raymond Crisp (Urbana: ISCPET, 1968), P. 8.

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Joan Harris, "The Teaching of English in Grades Seven, Eight, and Nine in the State of Illinois, p. 6.

knowledge of language structure and due to the fear engendered by their difficulty with items on the pre-test and due to their actual lack of background (with some exceptions), the teachers were forced to review to some extent the problems a child encounters in language learning.

The small class size and the circular, face-to-face seating arrangement provided an informal group atmosphere and facilitated the observation of the language processes of their fellow teachers. From the beginning, the writer maintained a strictly inductive approach and transferred teacher authority to a great extent to the group in that peer approval and judgment guided the individual teacher-student in evaluating his performances and activities.

During the class days devoted to phonetics, each student was responsible for bringing a mirror to class. At first, the groups were inhibited, particularly the male members. The students worked through each phonetic symbol, listing contrastive data to aid in identifying each sound. Using the mirrors, each student checked his lip position, tongue position and mouth movement as he encoded the various sounds. Kinesthetic clues were also utilized. For example, the student felt his throat for vibrations in order to separate voiced from voiceless sounds. They worked in pairs or in small groups to check individual ways of encoding the sounds. As a unit, the class tested ranges of acceptance for a number of variant allophones as encoded by some of the students.

During the first week and a half of class, some part of the session was given over to practice of phonetic transcription. To test their progress, the students were required to transcribe fifteen words and expressions with

such precision that their own particular idiolect pattern would be represented. The words and expressions were taken from Discovering American Dialects by Roger Shuy. In addition, the class members were to transcribe five regional expressions they had personally heard and indicate, if possible, the area in which they had heard and terms. Thus, the exercise also provided a linguistic field study. It was interesting to note that their transcriptions of regional expressions duplicated some of those recorded in Shuy's survey such as "firefly", "you all" and "bubbler". In addition, such local Chicago expressions were uncovered such as "flat", "Wow", "duper", "prairie" and "buck town".

Phonemic analysis was discussed primarily in terms of application to the spelling and reading processes. Each student was asked to report upon the etymology of a word and in so doing, to correlate changes in spelling to changes in pronunciation as they occurred in the history of the word. Comparisons of the pronunciation system within several dictionaries were made. The students explored identification of parts of speech through word forms as well as identification of parts of speech through examination of their functions within the sentence. Prefixes and suffixes were studied as to phonological-morphological correlations and as functional syntactical roles were attached to certain words. The students were encouraged to describe basic phoneme patterns in the English language and to devise new ways of grouping spelling words according to phonemic patterning.

Duration and other timing factors involved in intonation patterning were examined with the aid of a metronome. Also, the students practiced rapid-fire sentence patterning in the form of short dialogues. Students

were asked to individually enact nursery rhymes while reciting them so that the kinesthetic clues furnished thereby would aid in promoting vocal variety.

A particular successful experience was generated from the assignment of poetry writing. It was felt that teachers too often serve merely as decoders of literary forms rather than as encoders. J. N. Hook states:

Perhaps the biggest weakness of such programs (teacher preparation) lay in the lack of breadth in the English courses. English is a three-part subject. An English teacher needs to teach literature, composition and the English language. In college in the fifties he usually obtained a reasonable amount of exposure to literature; very often, in fact, all his college English work except for the universally required freshman composition was in literature.<sup>4</sup> He often had no study of language and no advanced composition.

In addition to writing a poem, each teacher was responsible for translating the poem into phonetic representation including the placement of primary and secondary stress markings. The day that the poems were turned in, the poems were distributed to members of the class other than the encoder. The class members had to decode the poems in an expressive manner in front of the class. Disagreement was frequent among various decoders of the same poem and between author of poem and decoder. Since the teachers were being judged by their peers, they were able to benefit from criticism of their speaking style which was usually not afforded in their own classrooms.

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J. H. Hook, "The State of Teacher Preparation Programs in English," in Issues in the Preparation of Teachers of English edited by Raymond Crisp (Urbana: ISCPET, 1967), p. 39.



Using a variety of teaching aids, Sister Constantine guided the students through the transformational approach to language analysis. She concentrated on the interpretation provided in the textbook, Transformational Grammar and the Teacher of English, written by Owen Thomas. In addition, she presented the various processes of learning as represented in Guilford's "Structure of Intellect" Model. She found the students eager to investigate the new model of learning. She attributed this to the previous three-week indoctrination against exclusive reliance on memorizing as the key to language learning and insistence upon new auditory and kinesthetic methods of unlocking the structure of the language.

Both Sister Constantine and the author were pleased with the progress of the students in terms of knowledge gained and in terms of attitude-change toward the requirements to be met in presenting linguistics as a translation process involving, as it does, a search for new analytic techniques to be developed and a creative approach to devising and presenting new experiences in language learning.

The final test showed mastery of the basic terms which were covered in the course. ~~The individual~~ projects submitted as a major task of the course exhibited for the most part originality and application of knowledge gained through the course to practical situations which the particular teacher faced in his teaching assignment. A number of projects dealt with proper breathing and phonation patterns to be used by the teacher. One project applied phonetic analysis techniques to the speech education of the partially deaf. Two projects isolated the particular phonemes which proved of difficulty to children with a foreign language background and suggested means

of coping with second-language interference problems. Several projects compared and contrasted phonemic systems of sound representation. One project attempted to apply the ITA system to reading instruction. Quite a number of projects presented original grouping patterns for the mastery of spelling individual items within the groups. Two teachers recognized the inadequacies of their own intonation patterns and prepared an analysis of their difficulties along with indications of how they would remedy them. Three teachers were concerned with incorporation of transformational analysis within their language arts programs.

An additional measure of attitudinal change was provided by the ungraded assignment of defining language learning which was given mid-way through the course. The citation of three comments made by Student A, B and C should serve to represent to a great extent the feelings of the teachers as they had come to grips with the structural analysis of language. Student A was a very quiet student who contributed only when called upon. He writes:

Linguistics was a scourge to me,  
 In my initial meetings.  
 The phonetics ranged from "ah" to "t",  
 And gave me neurological beatings.  
 The sound symbols were just like Greek,  
 With their unfamiliarity.  
 But now, my language thoughts have changed,  
 And English again isn't foreign to me.

Student B showed a considerable amount of interest in the course as evidenced by her class participation. She wrote:

Phonetics is a handy way  
 To symbolize what we can say.  
 It enables us to decode a sound  
 That would otherwise be to phonemics bound.

Finally, Student C who showed perhaps the greatest interest in the course, and whose contributions were invaluable in sparking the class, writes:

For me, the phrase, "linguistics as language learning," defines the situation wherein the progressive teacher utilizes an applied linguistics approach to teach a spoken language. Using principles of the linguistic science, language learning becomes a descriptive (good-bye, prescription grammarians!), living (Jump, Tabby, Jump is out, and realistic conversational lessons are in) experience that allows the student to reach the thrill of actually communicating in his second language, and not leave him simply with a long list of memorized vocabulary words. The teacher's knowledge of linguistics will be tremendously appreciated as she plans a meaningful program of aural-oral instruction.

In the judgment of the writer, the progress made by the teachers with respect to reformulating descriptions and approaches to language learning as a translation system demonstrated the feasibility of the proposed translation theory as a viable classroom learning schema. However, it should be noted that the success of such an approach requires an atmosphere of relative freedom, of dedication to inquiry and of tolerance to opposing viewpoints. To study language is to study an ever-changing system. In every message exchange, each component part is at once greater and lesser than the sum of the whole. Every message must be codified, transmitted and subjected to one or more decoding processes. Teachers of language arts need to be aware that something is always lost in the translation.

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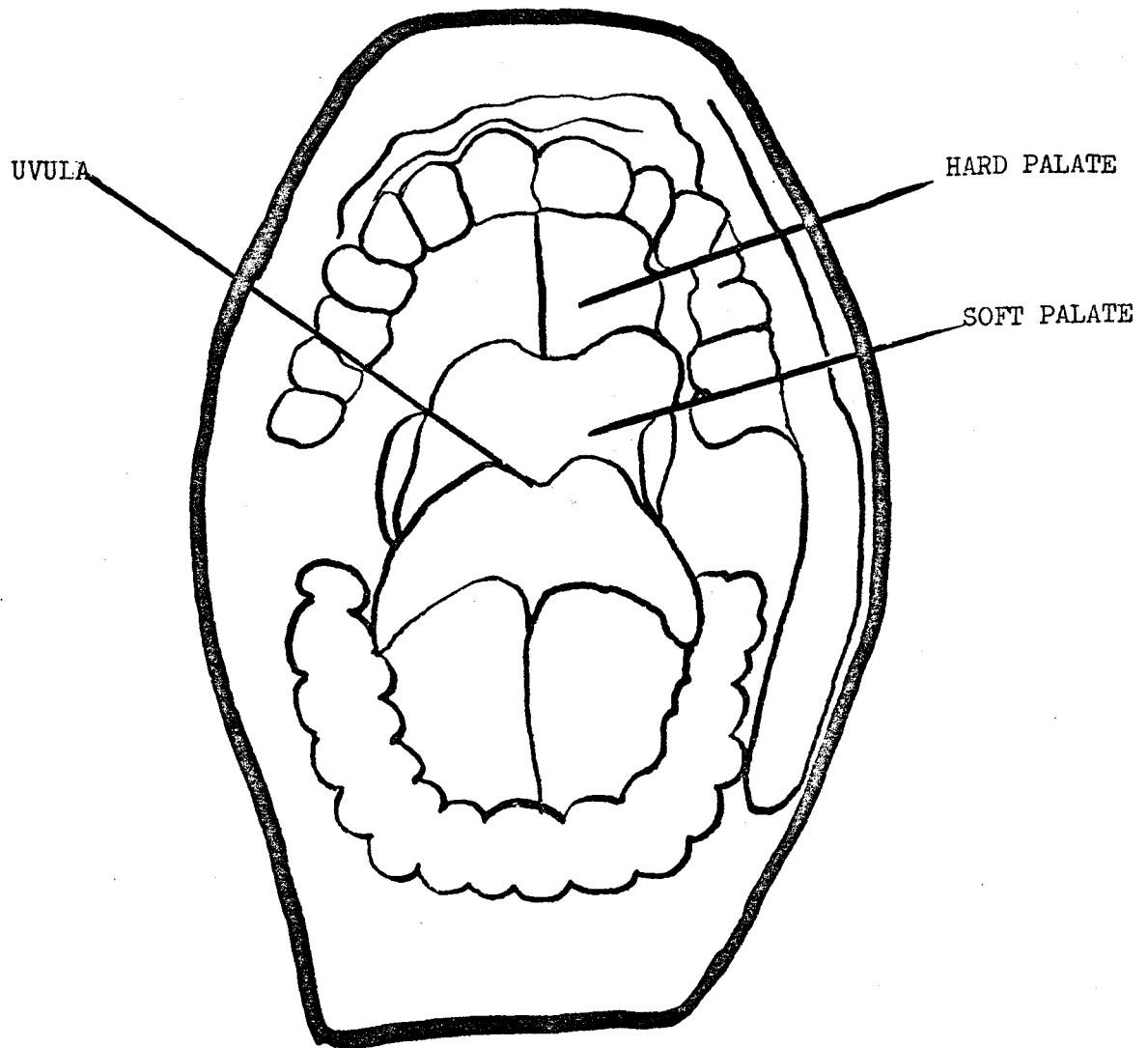
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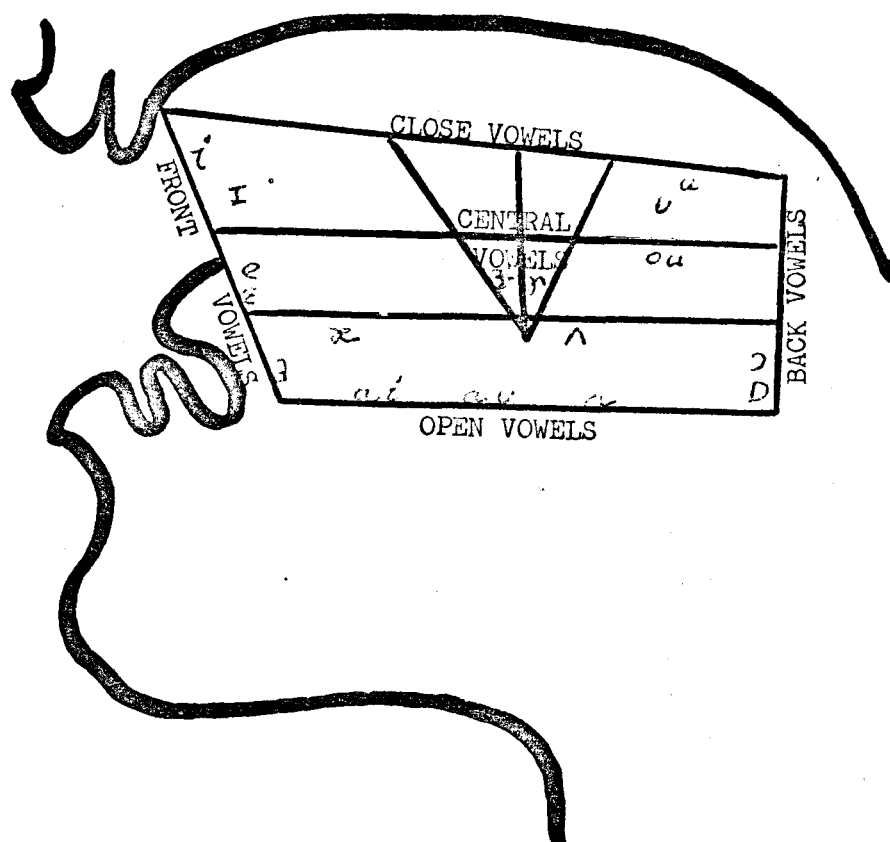
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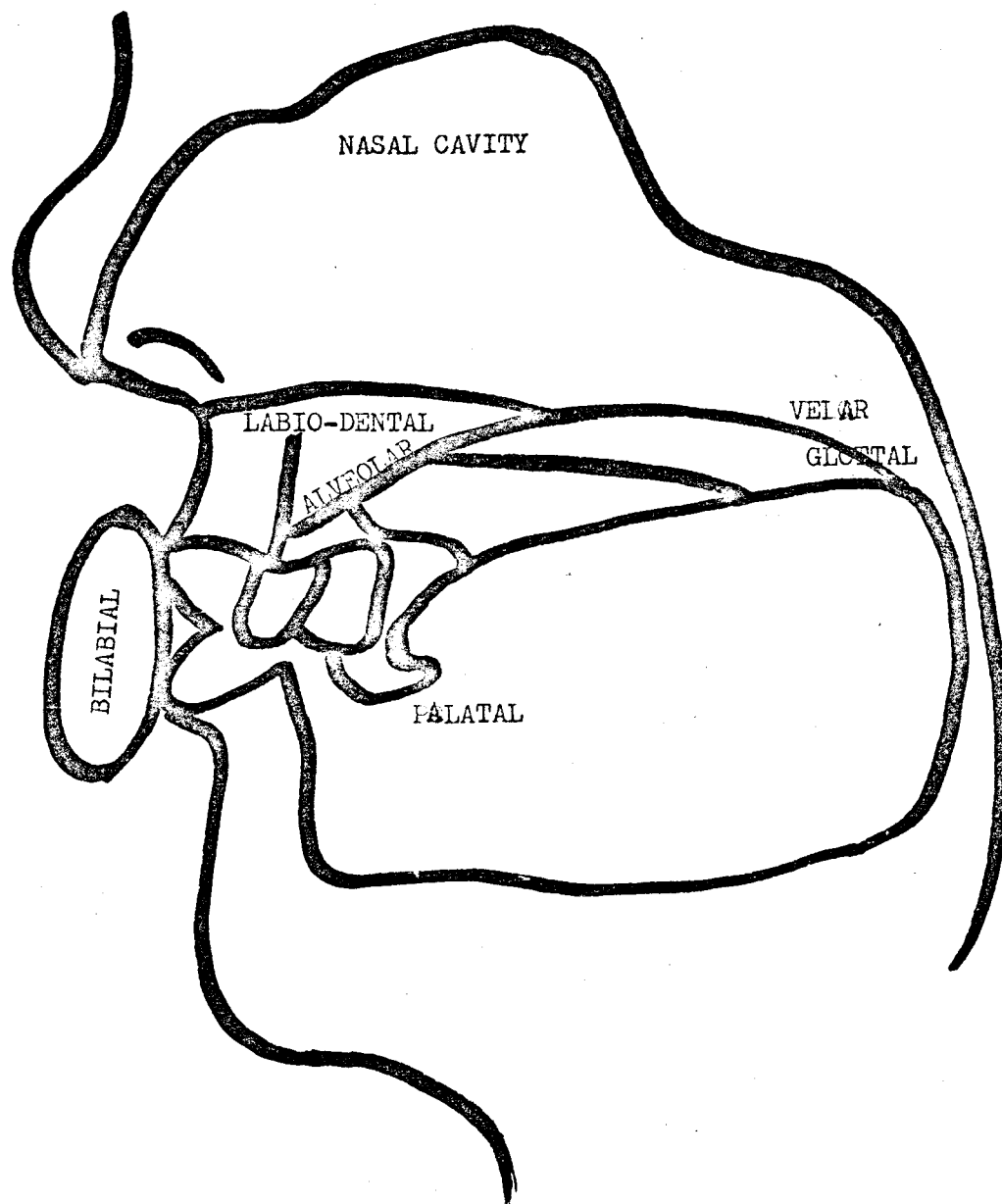


ORAL CAVITY



## VOWEL PRODUCTION

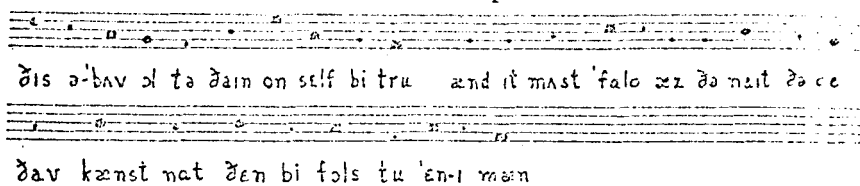




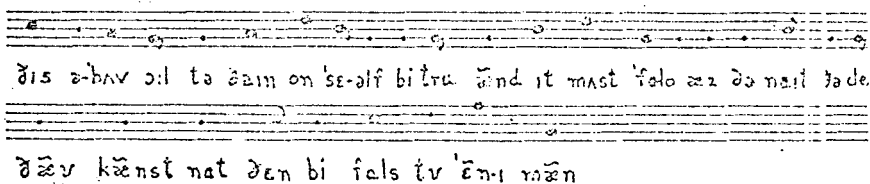
SAGITAL VIEW OF NASAL AND ORAL CAVITY

PYLES	TRAGER-SMITH	EXAMPLES
<u>It</u>	<u>it</u>	it
<u>Elf</u>	<u>elf</u>	elf
<u>at</u>	<u>at</u>	at
<u>bul</u>	<u>bul</u>	bull
<u>stop</u>	<u>stop</u>	stop
<u>san</u>	<u>san</u>	sun
<u>3rn</u>	<u>urn</u>	urn
<u>galap</u>	<u>galap</u>	gallop
<u>tua</u>	<u>tuh</u>	tour
<u>et</u>	<u>et</u>	eat
<u>ep</u>	<u>ep</u>	ape
<u>bat</u>	<u>bay</u>	busy
<u>oil</u>	<u>oil</u>	oil
<u>ooze</u>	<u>ooze</u>	ooze
<u>ots</u>	<u>ots</u>	oats
<u>haw</u>	<u>haw</u>	how
<u>feud</u>	<u>feud</u>	feud
<u>ought</u>	<u>ought</u>	ought

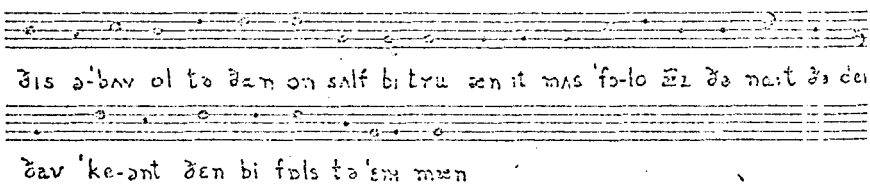
## 1. Standard American speech



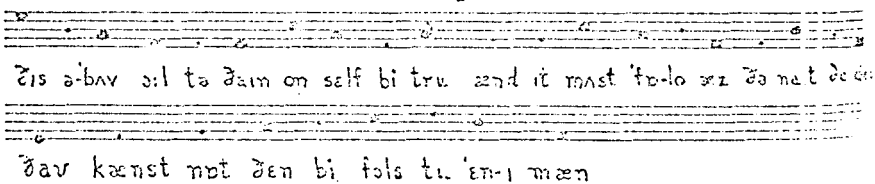
## 2. Regional New York City speech



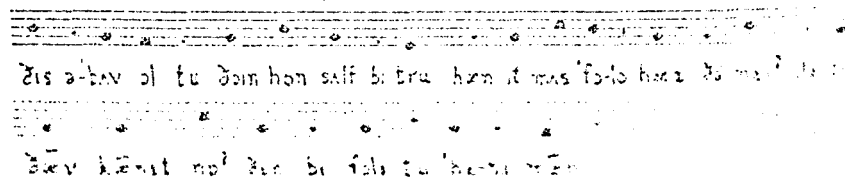
## 3. Southern Virginia speech



## 4. Standard British speech

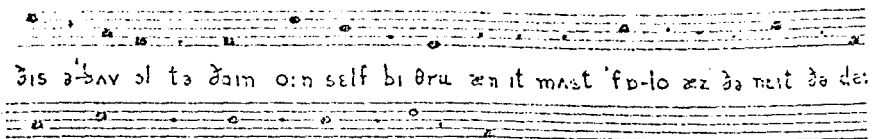


## 5. Cockney speech



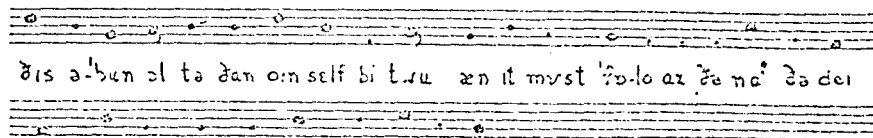
## VARIOUS INTONATIONAL PATTERNS

### 6. Irish speech



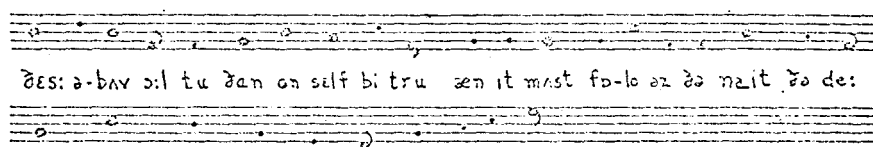
This a-bay ol ta dam on self bi tru an it mast fo-lo az da nait da de:  
 dav kanst nat den bi fols tu 'm-i man

### 7. Scottish (Lowland) speech



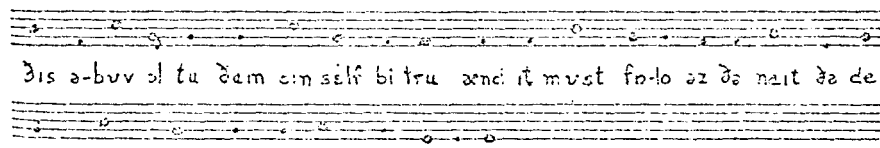
This a-ben ol ta dan on self bi tru an it must fo-lo az da na' da de:  
 dav 'ka-na den bi fols te 'vn-i man

### 8. Welsh speech



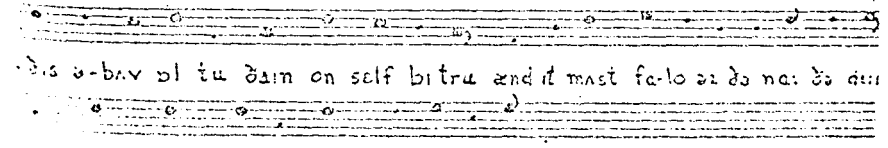
This a-bay ol tu dan on self bi tru an it mast fo-lo az da nait da de:  
 dav kanst nat den bi fols: tu en-i man

### 9. Northern British (Lancashire) speech



This a-bay ol tu dam on self bi tru and it mast fo-lo az da nait da de  
 dav kanst nat den bi fols tu en-i man

### 10. Yiddish speech



This a-bay ol tu dam on self bi tru and it mast fo-lo az da na: da de:  
 dav kanst nat den bi fols tu en-i man

## VARIOUS INTONATIONAL PATTERNS

APPROVAL SHEET

The dissertation submitted by Sharon F. Kissane has been read and approved by three members of the faculty of the School of Education, Loyola University.

The final copies have been examined by the director of the dissertation and her signature which appears below attests to approval of the final form of the dissertation with respect to content, form and mechanical accuracy.

Date January 12, 1970

Signature of Advisor Sister M. Constantine, S.S.J.