A PSYCHOLINGUISTIC ANALYSIS OF NATIVE GERMAN SPEAKERS READING ENGLISH: IMPLICATIONS FOR TEACHING READING

> Thesis for the Degree of M. A. MICHIGAN STATE UNIVERSITY BARBARA WILLOUGHBY MOTT 1977



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ABSTRACT

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By

Barbara Willoughby Mott

The mature second-language student, in learning to read proficiently in the target language, must adhere to certain psycholinguistic principles that are universal. The primary tenet is that he must read for the express purpose of cognition. To this end, he must attempt to process information in two to three underlying language systems -those of syntax, semantics, and phonology.

The purpose of this study is to determine how closely a native German speaker approaches the task of reading in English in a similar fashion as in his native language.

This was accomplished by means of the <u>Reading Miscue Inventory</u> (RMI), which is based on the Goodman model for miscue analysis. Seven native German subjects between the ages of 16 and 21 were analyzed in such a way that their oral reading miscues were described both quantitatively and qualitatively in German and in English. An assessment was then made to determine the proficiency of each subject's readings by comparing the results of the miscue analyses with an oral retelling, in both languages, of what had been read.

Conclusions on the pedagogical implications of teaching reading, in English, to second-language speakers were then drawn. The basic

findings show, among other things, that the subjects:

- demonstrated proficiency in reading English that was related, to a considerable degree, to the level of proficiency in reading the native German.
- 2. read primarily for grammatical structures which were complete and could bear meaning in English.
- 3. attempted to gain semantic control of the English readings by increasing the quality of their semantic miscues during the course of the story, and by allowing for semantic 'buildup'.
- 4. kept closer to the graphic representation of the text when they were reading less proficiently than others in the group.

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A THESIS

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CHAPTER I

INTRODUCTION

The Problem

Our understanding of the process, and even the significance, of reading in second-language study has changed considerably in the last three quarters of this century, according to the linguistic and pedagogical theories prevailing at any given time within this period. The impact of each theoretical stance has been felt in the classroom, ultimately, by way of new methodology and teaching psychology -- but often at a lag (of up to twenty years) behind the theory itself. It is possible to see how three major strategies in foreign language instruction -- the grammar-translation method, the direct method, and the audio-lingual method -- have followed theoretical linguistic development previous to present-day psycholinguistic research. It is only now, however, that classroom methodology is beginning to reflect the changes needed to align current teaching practice with this new research, and the analyses of the cognitive method of instruction have yet to be generally accepted.

Whereas the grammar-translation methodology of the turn of the century sought to use reading primarily as a vehicle for the developing of translation skills and a grammatical understanding of a new language, the more recent direct method (approximately 1930 to 1945) and the audio-lingual method (approximately 1945 to 1970) have attempted to emphasize active use of speech in situational contexts or patterned

language drills, at the expense of any extensive reading instruction

at all. As Norris indicates:

. . . in many English-as-a-second-or-foreign-language programs, especially intensive courses for adult students, the written language has been de-emphasized almost to the point of extinction.

. . . Witness, for example, the first two "principles of foreign-language teaching" listed by Cornelius in his <u>Language Teaching</u> (a book that, along with Fries's <u>Teaching and Learning English as a Foreign Language</u>, was one of the two most influential teacher guides in the early application of the oral approach to the teaching of English as a foreign language): "(1) The objective of a teacher of a foreign language is to expose students to the language as it is spoken. (2) The ability to read and write a language <u>may come as a by-product</u> of the process of learning the spoken language." (italics added).¹

Reading, however, is very much more than an acquired by-product

of oral language instruction in the framework of the cognitive approach to language based on psycholinguistic theories. Within this framework it is also viewed as more than just a vehicle to a grammatical understanding of the language. Reading is, in the words of Frank Smith, "an act of communication in which information is transferred from a transmitter to a receiver;" [it] "is an act of language only superficially different from the comprehension of speech."² Thus, reading is not considered an end in itself, with an understanding of linguistic structure as its only focal point, but rather it is a means to other ends -- a mode of communication as important as oral speech, which informs and transmits meaning. It must therefore be considered as significant in the teaching of a second language as is oral speech.

In the teaching of English as a second language, little thought has been given to the relationship between the oral language abilities or deficiencies that a student may have in his own language, and those he may exhibit while acquiring English. Naturally so. It has been tacitly assumed that the student has unconsciously developed a complete linguistic model of his native language, during childhood, and that major deficiencies will not appear subsequently. It has also been generally accepted that a transfer of productive control from the native language to that of a second language, even with an active knowledge of the target-language rules which differ from the native language, does not necessarily follow. Significant syntactic, semantic, phonological, and sociolinguistic differences may exist between the given languages which cannot be entirely bridged. Additionally, the age of the student, the number of languages already in his repertoire, and even the degree of motivation he demonstrates to master the targetlanguage may be factors which distinguish the learning of a second language from learning one's native language.

And yet in the area of reading, some fundamental principles which underlie the <u>process</u> of acquiring meaning from print are found to overlap among languages of the Indo-European family. These similarities in processing print make a closer look and comparison of a student's attempts in both his native language (if it is of this group of languages) and English useful, even revealing for the English instructor.

1

Reading, as a linguistic process, is not usually learned in any native language until a comparatively mature model of that language is internalized by the child. Thus, according to recent cognitive theory on native-language acquisition, when the child customarily begins to read at around the age of four to six years, he already has a firm understanding of the semantic, syntactic, and phonological categories or systems of language that combine to make his oral language meaningful and acceptable within his speech community (even if these categories

have not been consciously apprehended, as they almost never are).

But while most children learn to speak their native language fluently without any formal training whatsoever, not all children will master the process of reading in their native language with the same fluency. This is not to say that an innate competency or ability to to learn to read is not present, but that for one reason or another (often because of the method employed by a teacher at crucial stages of formal instruction), the child has not learned to focus on reading for meaning with the help of <u>all</u> underlying language systems at his disposal.

Likewise, the mature language user may be limited in his ability to read a second language fluently and effectively if he is not making use of all available language systems <u>for the express purpose of</u> <u>cognition</u>. He, too, must be attempting to process semantic, syntactic, and grapho-phonic cues in the surface structure of the second language if he is to acquire meaning.

Purpose of the Study

Several major studies have been undertaken since 1973 which use Goodman's and Burke's miscue analysis to focus on a reader's use of the underlying language systems of English, and to determine the relative proficiency of a reader by measuring the comprehension levels of his retelling. The results have been both interesting and instructive, especially with regard to the question of dialectal language differences and their effects on reading standard English (see end of chapter).

The present study, while limited in scope, attempts to use miscue analysis to study second-language reading proficiency on the part of

native speakers of German, reading both in English and in German. The two sets of data -- miscues in English and miscues in German -- have been analyzed and compared to delineate similarities and differences in the subjects' ability to process written versions of their native language and a second language.

The purpose of the study is, therefore, three-fold:

- To determine how closely a German speaker approximates the task of reading in English to that of reading in his native language, by describing the oral reading miscues in each language quantitatively and qualitatively.
- 2. To assess the proficiency of the subject's reading for comprehension in both English and his native German by means of an oral retelling in each language of what has been read previously.
- 3. To draw conclusions on the pedagogical implications of teaching reading in English to second-language speakers, making use of the RMI as a diagnostic tool.

Definition of Terms

<u>Miscue</u> - An oral response by a subject which deviates from the printed page and does not correspond to the response expected by the tester.

<u>Psycholinguistics</u> - The study of the interaction of linguistic and cognitive processes.

Graphics - The orthography of language (written).

Phonology - The sound system of language.

Semantics - The component of language which incorporates meaning.

Syntax - The grammatical component of language.

Limitations of the Study

Because this study concerns itself with the oral reading and retelling of subject matter in German and English only, results cannot necessarily be taken to reflect on the reading of any other language.

Furthermore, since this examination of oral reading miscues was made on two specific English stories and two specific German stories,³ comparable results cannot automatically be assumed for other reading materials.

Although the study attempts to analyze the degree of reading comprehension acquired by the subject through an oral retelling, it cannot measure comprehension which may not have been verbalized.

The results of this study, which rests on data provided by seven subjects, may suggest pedagogical implications for a larger population of second-language students in English. However, the results cannot be generalized statistically.

Relevant Theoretical and Practical Research

Research in linguistics, psycholinguistics, and the nature of the reading process is extensive and growing. This particular study draws most heavily upon the work of several eminent linguists and psycholinguists whose research spans several generations in time but whose theories support and underlie miscue analysis;

Noam Chomsky's linguistic theories on transformational-generative grammar are the basis for all subsequent psycholinguistic research. His <u>Syntactic Structures</u> (1957), <u>Aspects of the Theory of Syntax</u> (1965), and <u>Topics in the Theory of Generative Grammars</u> (1966) provide the framework for a conception of reading which makes use of three major

language systems -- syntactic, semantic, and (grapho-) phonological.

E.B. Huey's <u>The Psychology and Pedagogy of Reading</u> (1908) outlines his theories regarding the psychology of reading, as well as giving a summation of the history of reading, reading methods, and the pedagogy of reading.

Frank Smith offers a current-day psycholinguistic viewpoint of the reading process in <u>Understanding Reading: A Psycholinguistic</u> <u>Analysis of Reading and Learning to Read</u> (1971), <u>Psycholinguistics and</u> <u>Reading</u> (1973), and <u>Comprehension and Learning: A Conceptual Framework</u> <u>for Teachers</u> (1975). His theories call for the development of a cognitive methodology for the teaching of reading in the school.

Kenneth Goodman, in <u>Reading: Process and Program</u> (1974), sets forth a psycholinguistic model of the reading process, which is the theoretical underpinning of his work with miscue analysis. <u>Theoretically</u> <u>Based Studies of Patterns of Miscues in Oral Reading Performance</u> (1973) represents Goodman's major and seminal work in miscue analysis, although further research has continued to grow out of the study.

More recent research using miscue analysis to address the problem of reading in second-language contexts include:

Jane Romatowski, <u>A Psycholinguistic Study of Reading Miscues</u> <u>Generated by Selected Bilingual Subjects . . (Polish and English)</u>, unpublished dissertation, Wayne State University, 1972.

Phyllis Hodes, <u>A Psycholinguistic Study of Reading Miscues of</u> <u>Yiddish-English Bilingual Children</u>, unpublished dissertation, Wayne State University, 1976.

Sarah Lopez, <u>The Use of Context by Native Spanish Speaking</u> Mexican-American Children When They Read in Spanish, unpublished

dissertation, University of Texas at Austin, 1975.

Space does not permit a comparison of the results of this research with the present study. A future analysis, however, might consider such a comparison.

CHAPTER II

RESEARCH PROCEDURE AND FORMAT

The format of this study allowed for a description and an analysis of the oral reading miscues (or deviations) of native German speakers, in both their own language and in English. Analysis then focused on the differences, in quality and quantity, of miscues made in each language by individual and language group.

This chapter outlines the procedure employed in the selection of subjects, preparation of materials, administration of readings, collection of data, and method of analysis. It also provides background on the use of Y. Goodman's and C. Burke's <u>Reading Miscue Inventory</u> (RMI) as it was originally intended for native English language readers, and as it was adapted for use with second-language English readers.

Subjects

Seven German students, between the ages of eighteen and twenty-one, were selected to participate in the study, based on several criteria. In the first place, each student had been in the United States for only four weeks, as a part of an American/German student summer exchange for language study at Hope College, Holland, Michigan. This factor insured that the subjects were not any more influenced in their reading or oral discourse by acculturation to this country than would most foreigners found in the average ESL classroom at the beginning of their English studies in the States. Secondly, the subjects were screened

to determine that they were <u>not</u> bilingual (i.e. English is not used alternately with German in their home environments).

All subjects came from the vicinity of Westphalen, Hessen, and the northern part of West Germany, and had completed from seven to eleven years of schooling in the Gymnasium. None of the subjects had yet begun university work, although five indicated intentions to do so. The average length of formal English training received by the subjects while in Gymnasium was eight years, which presumes a certain degree of competence on the part of each subject in his receptive control of oral and written English at the outset of the study.

Preparation of Material

The selection of two English and two German short stories was made on the basis of length and approximate difficulty.

The German stories chosen were "Der Wolf" by Herrmann Hesse and "Das Maerchen der Maerchen" by Wolfdietrich Schnurre, taken from the anthology <u>Aus unserer Zeit: Dichter des Zwanzigsten Jahrhunderts</u>.⁴ The preface of the anthology notes that "<u>Aus unserer Zeit</u> is a collection of works by modern German authors designed to introduce the second-year German student to some of the writers and literary trends of twentieth-century German literature" (p. xi). While readability factors do not exist for determining the "grade level" of literature in German schools⁵ the material would first be exposed to native German readers at approximately the age of 14-15. In all cases, the single German story chosen to be read by any individual subject was one which he had not seen previously.

The English selections were the stories "Caged" by Lloyd Eric

Reeve, and "The Alchemist's Secret" by Arthur Gordon.⁶ The SMOG readability formula was administered to both texts to determine approximate "grade levels" for their use in American public schools; in each case, a ninth grade readability was determined. Thus, in both the German and English selections, a native subject of approximately 14-15 years of age or older would find the selections suitable, and the degree of difficulty comparable. The subjects of this study undertook the reading of one of the English stories, which, in all cases, had not been read previously.

Administration of Readings

Every subject was taken to a small room for the reading procedure; only he and the investigator were present. After an initial period of collecting personal information from the subject, the subject was asked to read the chosen English and German stories aloud in their entirety, with no assistance or interruption on the part of the investigator. An audio tape was made of each reading.

After reading each story, the subject was asked to put the script aside and to retell, in his own words, all that he could recall about the story. The investigator did not comment or question until the subject had divulged all that he could remember by himself. Thereafter, the investigator attempted to elicit as much additional information as possible, but without ever referring to anything, general or specific, which had not already been mentioned by the subject himself in the retelling. The investigator was also careful to maintain a stance that neither confirmed nor rejected the validity of the information provided by the subject. For instance, if a subject referred to a character named Purcell in "Caged" as /perkal/, the same pronunciation of the

name was used throughout the questioning period by the investigator. Likewise, if a subject understood the story to be taking place in London rather than in Paris, the investigator assumed this position as well in asking other open-ended questions that would draw out more of what the subject recalled.

In an effort to avoid giving the subject new information or verbal cues, the investigator would elicit additional details from the subject by asking questions such as:

- Tell me everything you can remember.

- What else do you recall ?
- Who (else) was in the story ?
- When (where) did the story take place ?
- How do you think _____ felt ?
- Why did do (act) ?
- What happened next ?
- Did the author have a purpose in writing the story ?
- What did you think of the story ? Why ?

Collection of Data

With the tapes of all readings and retellings, the investigator was subsequently able to mark duplicate copies of the texts for all deviations from the text. A marking system was adopted that resembled that of Y. Goodman and C. Burke for miscue analysis (See Appendix A). Retellings were typed verbatim from the tapes in dialogue form; the investigator then marked a "Guide to the Retelling " (See Appendix B) to measure the amount of recall and the degree to which information was synthesized for meaning.

Marking of Data

The procedure adhered to in marking and analyzing the data was that established by the Center for Reading Miscue Research at Wayne State University. The audio tapes of each reading were examined closely by two researchers who marked duplicate copies of the text using the marking system developed by Y. Goodman and C. Burke. The researchers then reviewed any areas of the tapes where there was a difference of opinion on the oral response of the reader, and mutually reached a decision. The final copy of the text, which represented an agreement on the part of the two researchers as to the oral responses of the reader, was then coded for the nature of miscues involved according to the Goodman/Burke guidelines (cf. Chapter 6, RMI manual). The short form of the Goodman taxonomy was used throughout.

As previously stated, the Y. Goodman/C. Burke <u>Reading Miscue</u> <u>Inventory</u> is based on psycholinguistic theory regarding the process by which a reader reconstructs the original intent of an author from print. As comprehension is the initial motive and ultimate end in reading, the process itself must move consistently towards that end by means of the scanning, fixing, selecting, predicting, testing, regressing, and confirming strategies described by Goodman in <u>Reading:</u> <u>Process and Program</u> (1974). The categorical breakdown of language cueing systems -- phonological, semantic, and syntactic -- on the RMI coding sheet allows the investigator to analyze individual oral miscues, which in turn reveal the manner in which the reader uses the various strategies to acquire meaning.

Each of the nine categories, then, on the RMI coding sheet, refers directly back to the phonological, syntactical, and semantic processing

done by the reader. The nine categories of miscue analysis include:

- 1. Was the reader's oral miscue actually a dialectal form of the
 expected response ?
- 2. Was intonation or stress found to deviate from that of the expected response ?
- 3. How similar would the graphic representation of the oral miscue look compared to the actual graphic information found in the text ?
- 4. How similar was the oral miscue phonetically to the expected response, based on the graphic and syntactic information provided in the text ?
- 5. Is the grammatical function of the oral miscue the same as that of the intended item in the text ?
- 6. Did the reader correct the oral miscue in question ?
- 7. Did the oral miscue occur in a sentence structure which was syntactically acceptable as it stood (disregarding the overall context of the story) ?
- 8. Did the oral miscue occur in a sentence structure which was semantically acceptable as it stood (disregarding the overall context of the story) ?
- 9. Did the oral miscue result in a change of meaning from that which the author intended (within the contextual framework of the story) ?

In scoring the RMI's in this study, categories 1., 2., and 6. were marked with a straightforward positive or negative symbol; but categories 3. through 5. were marked by 'Y', 'P', or 'N' so as to indicate whether there was 'high', 'partial', or 'no' correspondence (for category 5. 'P' represented the fact that grammatical function could not be determined; e.g. a nonsense word with no inflectional cues was substituted in the given textual item). Categories 7. and 8. were also marked with 'Y', 'P', 'N' to indicate 'full', 'partial', or 'no' acceptability; in the case of category 9., the marking reflected the degree of change --'complete', 'partial', or 'none' (See Appendix C for an example of the coding sheet based on the Goodman Taxonomy, Short Form).

Adjustments of the Marking System

To adapt to the unique situation of having a foreign language speaker reading in English and in his own language, the RMI marking system was altered as follows, for reasons which will be subsequently explained:

"Dialect" Miscue category 1. is interpreted in the reading of German by the subjects to be the same as it would be for an English language speaker reading English. Regional, social, even idiosyncratic elements of dialect that contrast with 'standard' Hochdeutsch are reflected in this category. However, as the subjects do not possess a completely developed rule-bound and consistent English dialect, the "Dialect" category for their English readings is used to represent primarily phonological differences that exist in pronunciation because of phonemic interference from the native language. For instance, the word 'sighed' is consistently pronounced /sayt/ or even /saytad/ by the subjects tested, because the graphic feature 'd' represents the phoneme [t] when found at the end of a German word. Likewise, the graphic features 'th', when signaling the phonemes[5][6] in a given English word, are often pronounced with the phones [s] and [z] by a German speaker, thus creating a transcription such as /wIz/ rather than wI@.

Category 4., "Sound Similarity," is marked according to how much phonological deviation there is from the expected oral response of standard English. Consistent phonological differences as found in category 1. for the subjects reading English were never found to constitute a significant phonological deviation, since the range for variance is large: one codes whether the sound similarity exists to a high degree, to some degree, or not at all. Y. Goodman and C. Burke determined that the best method of designating the degree of variance was to break the reader's response into three parts -- beginning, middle, and end -- and to make a judgment based on the amount of similarity among each of them to the expected response. If two of the three parts were found to be phonetically similar to the expected response, the item was said to be similar to a 'high' degree; one of three parts was similar to 'some' degree; no parts found to be similar constituted 'none'.

One last alteration was made in the RMI marking system which influenced the coding both for the German and English readings. It was determined that second-language speakers could produce utterances which were more semantically acceptable than syntactically acceptable, counter to the dictum for the coding of categories 7. and 8. established by Goodman and Burke. For instance, the English reading of a subject produced the following sentence:

"Remedy: six drops of the elixir to be <u>administered</u> in husband's hot grog at bedtime . . ."
Whereas the miscue of <u>administerz</u>/ makes the sentence syntactically unacceptable, only the changing of the tense morph from [d] to [z] is involved in the oral miscue of 'administered'. This does not affect

the semantic notion of the word 'administered' in context; it does not even affect the semantic understanding of tense, for that matter, since the preceding 'to be' clearly signals the future tense for the reader. Such a sentence was therefore coded to reflect a lack of grammatical acceptability but a high degree of semantic acceptability.

Analysis of Data

After all marking had taken place, the coding sheets were tabulated and checked to determine the percentages of 'high', 'partial', or 'no' correspondence per category. Additionally, the categories themselves were cross-checked to determine for each reader a) a pattern of the reliance on reading for grammatical relationships, and b) a tentative pattern of comprehension (which was then compared, for validity, with the reader's retelling). In the determination of these patterns, only particular categories were cross-checked, because of the nature of their interrelationship in the processing of language per se. Categories 6., 7., and 8. were cross-checked to determine the pattern of grammatical relationships established by the reader because of their focus on syntactic and semantic acceptabilities for sentences, and on the correction of those sentences which require it. Categories 6., 8., and 9., on the other hand, were cross-checked to determine a tentative pattern of comprehension because of their focus on the semantic acceptability of every sentence produced orally, and also of every sentence within the context of the story as a whole.

Statistics were next gathered to determine the numbers of oral miscues made by each subject per one hundred words of each story. Additional statistical counts were made to establish what percentage of the given oral miscues made by a subject were to be found in the two halves of their English and German stories.

In order to provide a more accurate picture of the cognitive processing of each subject in reading for comprehension, another set of figures was tabulated to determine how many miscues were of a 'high' order (semantically acceptable) and how many were of a 'low' order (semantically unacceptable, with loss of meaning incurred).

Further elaboration on the method used to obtain these statistics, and on the findings themselves will be found in the next chapter.

One last source of data will be noted at this point. Each subject was requested to fill out a questionnaire before undertaking his taped readings. This gave the researcher an opportunity to talk briefly with each subject and to put her or him at ease before the testing procedure. It also provided the researcher with additional information regarding the subject's origin, age, educational background, linguistic background, exposure to English (in an English-speaking country), tentative occupational goals, and personal reading habits. The subject was also able to note, from his or her own perspective, what aspect of reading in English was most difficult or least difficult for him or her. Several of the subjects spoke at length about items contained on the written questionnaire, elaborating where they felt it necessary. This information proved to be invaluable, as it gave insight into many of the strategies and attitudes observed of the subjects as they read and as they interpreted their readings afterward. It also gave to the researcher the subjects' own impressions of their reading abilities, which appeared to be significant in a number of cases.

CHAPTER III

ANALYSIS AND COMPARISON OF DATA FOR GERMAN AND ENGLISH READINGS

As previously stated, miscue analysis assesses the quantitative and qualitative nature of deviations from the text during oral reading. A comprehensive analysis of oral reading deviations can be used to measure the relative proficiency of the individual reader, to compare groupings of readers who may differ according to sociolinguistic factors such as dialect, culture, age, sex, language, and to determine the effectiveness of reading strategies used by the reader either consciously or unconsciously. Finally, it can give insight into the cognitive process of reading itself.

In this chapter, a close look will be taken at the categories of the RMI which will be discussed singly and as interrelated groups to underscore the interdependence of the language systems used in the reading process. Finally, a summary will be put forward to help focus on the more significant findings; from these findings a series of conclusions will be drawn which will subsequently be dealt with in the chapter on Pedagogical Implications (Chapter IV).

Quantitative vs. Qualitative Measurement

While miscue analysis recognizes the need to evaluate the genesis and significance of deviations from the written text, the simple enumeration of miscues must come first. From this information important

statistics can be gathered, including the number of miscues generated per hundred words (MPHW), and the number of miscues generated per half of the given story (MP¹₂S). The number of miscues per hundred words is determined by simply dividing the number of oral miscues by the number of words in the text, and then multiplying the quotient by 100. The individual MPHW scores are shown in Table 1. While the MPHW figure is an average, the MP¹₂S figure is an absolute count to determine to what extent miscues increased or decreased as the reader progressed through the text.

TABLE 1

Subjects	German MPHW	English MPHW
AN	1.1	3.5
BE	5.5	7.8
KL	1.0	4.8
KR	2.7	7.7
LA	4.9	9.1
RI	2.3	4.1
ST	4.7	8.4
MPHW Average	3.2	6.5

MISCUES PER HUNDRED WORDS

As can be seen in Table 1, the number of miscues per hundred words varies from 1.0 to 5.5 in German, and from 3.5 to 9.1 in English. The average number of miscues per hundred words, by language, was 3.2 and 6.5 for German and English respectively. Thus, a fraction more than twice as many miscues were made on average by subjects when reading the second language as were made when reading the native language.

Table 2 reveals that the average rate of miscues of all types combined increased from one half of the text to the other, in both of the languages being used. The average amount of increase is more for

TABLE 2

MISCUES BY HALF STORY FOR EACH LANGUAGE

	Ger	man	Eng	lish
Subjects	First Half	Second Half	First Half	Second Half
AN	10	6	18	11
BE	26	39	29	36
KL	4	8	21	19
KR	15	23	26	29
LA	22	36	33	43
RI	11	16	20	14
ST	26	30	33	37
Total MP ¹ ₂ S	114	158	180	189
Percent	41.9 %	58.1 %	48.8 %	51.2 %

German than for English, however. While miscues rose 16.2 %, from an average 41.9 % to 58.1 %, in the second half of the German readings,

English language miscues rose only 2.4 %, from an average 48.8 % to 51.2 %, in the second half of the text. Individual rates of change in the number of miscues differ much more, as might be expected. The general trend of increased numbers of miscues in the story's second half holds true for all German readings but one; on the other hand, three of seven English readings show a decrease in the number of miscues found in the second half.

A more significant finding results from determining the actual number of miscues made by the subjects overall, and then noting the average rate of increase or decrease in the second half of a story. By this method, it is found that in German those with a high number of miscues (56 or more) make 42.5 % of them in the first half, and 57.5 % of them in the second half. Likewise, those in German with relatively fewer miscues (less than 56) make 43 % of them in the first half and 57 % of them in the second half. The percentages remain stable despite the number of miscues made. But in English results take a dramatic turn. Those with a high number of miscues (55 or more) make 45.5 % of them in the first half and 54.5 % of them in the second half. Those with relatively fewer miscues (less than 55) make 57.3 % of them in the first half and only 42.7 % in the second half. Thus, while a general increase in the number of miscues is evident in the second halves of the readings, regardless of language, those subjects whose number of English miscues was relatively low to begin with, will actually show a decrease in the number of miscues made in the second half of the story. (Reasons will be offered as the analysis progresses).

Because the MPHW and MP¹₂S cannot supply qualitative information about the miscues made, different types of measurement must be used for

this purpose. One such measurement is the residual MPHW, as detailed by P. Rigg (1975). To determine the residual MPHW, all miscues which were semantically acceptable (or were corrected to become semantically acceptable) are subtracted from a subject's total MPHW. The result is a figure reflecting the number of miscues which cause a loss of meaning; they would represent 'low quality' miscues, i.e. those which do <u>not</u> help the reader gain meaning. Table 3 shows the residual MPHW for all subjects, in relation to their MPHW and retelling scores. The results reveal that the average residual MPHW is almost three times as high in English as it is in German; it is, of course, to be expected that a higher number of 'low quality' miscues would exist in the reading of the second language as opposed to the first. But the RMI has given us the quantity of this difference and the specific nature of the miscues involved.

TABLE 3

Subjects	MPHW	German ResMPHW	Ret.%	MPHW	English ResMPHW	Ret.%
AN	1.1	0.5	99.4	3.5	1.7	93.8
BE	5.5	2.1	80	7.8	6.0	88.8
KL	1.0	0.7	92.5	4.8	2.9	83.8
KR	2.7	1.3	97.5	7.7	5.2	58.8
LA	4.9	1.8	85	9.1	4.6	58.8
RI	2.3	0.9	82.5	4.1	2.1	63.8
ST	4.7	2.5	58.8	8.4	5.9	45
Averages	3.2	1.4	85.1	6.5	4.1	70.4

COMPARISON OF MPHW, RESIDUAL MPHW, AND RETELLING

Another interesting phenomenon is noted when individual retelling scores are compared with the residual MPHW figures. Retelling scores are based on a subject's cognitive recall of plot, theme, characters, setting, and development of the story. A trend is readily apparent, in that as the retelling scores (out of a possible 100 %) increase, the rate of residual MPHW decreases for both German and English. The trend is reversed in only one instance by subject KR reading in German; her residual MPHW is higher than that of subject RI by .4 and less than that of subject LA by .5, and yet her retelling outdistances both RI and LA by 15 % and 12.5 % respectively. In English the trend is reversed twice; once in a minor way and once dramatically. Subject KL has a residual MPHW which falls between that of subjects RI and LA by .8 and 1.7 respectively; but his retelling is greater than his counterparts' by 20 % and 25 % respectively. While the discrepancies can easily be accommodated within the general outlines of the profiles, subject BE's retelling and residual MPHW scores cannot. Subject BE has the highest English residual MPHW of any subject, at 6.0, which means that semantically unacceptable miscues are almost three times as prevalent in her English reading as in her German reading. However, BE's retelling scores are surprising; she has in fact the second highest retelling score in English (88.8 %), and yet she also has the second lowest retelling score in German at 80 %. To explain this phenomenon with miscue analysis is not easy, but such discrepancy is not unheard of. P. Rigg (1975) documents the case of one of her nine subjects who had the highest residual MPHW and the lowest comprehending score of all, and yet had the second highest retelling score as well. Rigg attempts to explain the unusual character of this

type of reading by suggesting that, according to records, her subject's formal training shifted from a language experience methodology to a heavily phonics-based methodology early in primary school. This, she feels, may have directed him to pay more attention to graphic/sound relationships, especially for oral production, than semantic and syntactic acceptability. "Somehow," Rigg notes, "with all the nonsense, both syntactic and semantic, that he produces, [he] still manages to understand the story . . . he evidently does try to get to the meaning of the story, and is rather successful at it. He exemplifies the <u>silent</u> correction technique . .." (p. 191; emphasis mine). Further analysis of BE's reading, in light of her residual MPHW and retelling scores, will be undertaken in the next section when individual results are discussed.

The second type of measurement used to analyze miscues qualitatively, is the comprehending score, which focuses upon the subject's ability to provide for language patterns from which meaning can be elicited. Goodman and Burke determine the comprehending score by taking the first fifty non-dialect miscues of each subject and measuring the percentage of 'high quality' miscues. By this, they refer to the percentage of the fifty non-dialect miscues which are semantically acceptable, or corrected to become acceptable, even if the intended meaning of the author has changed. For the purposes of this study, the comprehending score is determined by using <u>all</u> non-dialect miscues made by the subject, and finding the percentage of 'high quality' miscues therein. The reason for this is twofold. First, in this study the total number of miscues per subject ranges from 12 to 65 in German (with an average of 38.8 miscues), and from 29 to 76 in English (with an average of 52.8 miscues).

Since three of seven subjects have less than 50 miscues in English, and four of seven subjects have less than 50 miscues in German, it would not be possible to determine a comprehension score according to the procedure established by Goodman and Burke. Secondly, since the residual MPHW is an absolute value of the number of 'low quality' miscues made by each subject, the comprehension score (which reflects the number of 'high quality' miscues, minus any dialectal or partially semantically acceptable miscues) should <u>also</u> be an absolute value for comparative purposes, and not a merely relative value based on a fixed percentage of the miscues made.

Table 4 illustrates the relationship of comprehending scores to MPHW, residual MPHW, and retelling scores. It can be seen in all readings, except those of AN and KL, that the residual MPHW tends to be lowest when the comprehending score is highest, and vice versa. In these cases, it can be assumed that the rate of actual comprehension is indeed higher for the subject in German than it is in English. In the cases of AN and KL, however, the comprehending scores are distorted for both the English and German readings because of the unusually low number of miscues made by the subjects. The smaller the total number of miscues, naturally, the greater the percentage of difference each miscue makes when it is categorized. It is more valid, in the cases of AN and KL, then, to note the very low rates of residual MPHW and the very high retelling scores, rather than to attempt to seek a correlation between the comprehending score and the residual MPHW.

In summary, after a closer look at Table 4, we can restate some of the findings and hypothesize about their interrelationships within the language groupings. The averages of the MPHW percentages for both

TABLE 4

COMPARISON OF MPHW, RESIDUAL MPHW, RETELLING, AND COMPREHENSION

Subjects	мнам	Germa ResMPHW	in Ret.%	Comp.%	MHATM	Engli ResMPHW	lsh Ret.%	Comp.%
AN	1.1	0.5	99.4	38.5	3.5	1.7	93.8	51.9
BE	5.5	2.1	80	70.9	7.8	6.0	88.8	25
KL	1.0	0.7	92.5	27.3	4.8	2.9	83.8	37.8
KR	2.7	1.3	97.5	70.4	7.7	5.2	58.8	29.8
LA	4.9	1.8	85	62.5	9.1	4.6	58.8	53.6
RI	2.3	6.0	82.5	61.6	4.1	2.1	63.8	50
ST	4.7	2.5	58.8	50	8.4	5.9	45	29.5
Averages	3.2	1.4	85.1	54.5	6.5	4.1	70.4	39.7

languages show that twice as many miscues are being made in English as in German. Even more importantly, the averages of residual MPHW percentages for both languages show that three times as many miscues are of a "low quality," or are semantically unacceptable in the context of the English story. While the average comprehending score in German is 54.5 %, the average comprehending score in English is 39.7 %, or approximately three-fourths of the German rate. And finally, the average German retelling score is 85.1 % as compared with the average English retelling score of 70.4 %, which is approximately four-fifths of the German rate.

The question that arises is this: how can such a large degree of comprehension be manifest in the German subjects' reading of English, <u>despite</u> the number of miscues made -- so many of which destroy the semantic intentions of the text ?

For answers one must look further into the data provided in the inventory. The following section deals with a brief analysis of findings for each of the inventory's nine categories, as outlined in Chapter II.

Dialect

The attention given to the subject of dialect in the Goodman/Burke miscue inventory is highly significant, especially in view of the lack of importance it receives from so many other researchers and diagnosticians in the field of reading. Current research involving the English dialects of minority groups makes it apparent that variations and differences from standard English often affect a reader's oral production, and may influence the examiner's estimation of the actual
abilities of the reader. Spache (1976) remarks that only the Smith Bradtmueller reading inventory and his own Diagnostic Reading Scales, in addition to the Goodman/Burke inventory, exhort the researcher or instructor to "discount or ignore oral errors due to dialect." He further notes that Gates and McKillop "speak of not penalizing the child for 'accent' but it is not clear whether they are referring to dialectal errors or intonation" (p.138).

The Goodman/Burke taxonomy does not so much 'ignore' dialect as assess its impact on the process of acquiring meaning from print. Most applications of the inventory address themselves to non-standard English dialects, such as Black, rural Southern, Spanish-English, Samoan pidgin-English, and so on. But in all cases, the underlying assumptions are the same: if oral reading miscues can be identified as a part of the consistent and rule-bound dialect of the speaker (even if multiple miscues are then triggered within a given utterance) the grammatical and semantic acceptability of the utterance need not be automatically questioned.

In marking a dialectal miscue in the appropriate column on the coding sheet, semantically and syntactically acceptable categories of the inventory are analyzed with this factor borne in mind. But the effects of the dialectal miscue are primarily noticed in the categories of grammatical function and/or meaning change, due to the lexical and syntactic variations that are incurred. These categories will ultimately help to determine whether or not the intent of the author was maintained. Graphic and sound categories are also scrutinized for change, but phonological variation need not affect the meaning category at all. Y. Goodman notes in the RMI manual that sound-level dialect

.

variations (such as /pItcor/ for 'picture', /aydien/ for 'idea', or /wIf/ for 'with') are not generally even coded as miscues. However, in this study, because sound variations were the predominant difference found in a German subject's reading of English, all such deviations from standard English were initially marked and then surveyed to determine their relative importance. In many cases, a distinction had to be made between phonological deviations from the text that merely represented an imposed German phonetic feature on an understood lexical item, and a deviation that actually was no more than a partial "sounding-out" of an unknown lexical item. In the first case, comprehension was usually in no way affected; such phonological miscues were normally restricted to a set of features we readily recognize as being part of a German 'accent'. Occurrences of this type of deviation were then marked 'dialect' but were not included on the coding sheet because of their consistent use by all subjects, and their full rate of grammatical acceptability with no change in meaning. The following examples illustrate this:

[v] + [w]	/narwAsli/ /wlźltar/	nervously visitor
[w] → [v]	/vat/ /vərnt/	what weren't
[r] + [0]	/ ha; t/ / kadböd/	heart cardboard
[⊖] → (s]	/samsig/ /wis/	something with
【v】 → 【f】	/) f/ , / bilif/	of believe
[∂] → [ĕ] [0] → [ŏ] [u] → [ŭ]	/ wërk/ / röt/ / würst/	worked wrote worst

In the second case, the pronunciation actually rendered the item a 'nonsense word', and it had to be marked and coded accordingly. These items usually indicated semantic unacceptability and full meaning change, although inflection often verified that the function was not changed, and that an allowance for syntactic acceptability had to be made. Items of this sort were <u>not</u> marked 'dialect', as their pronunciation was idiosyncratic and highly unpredictable. Examples of this phenomenon include (\$ indicates a nonsense word):

		3	- 4	5		8	9
\$ / skra ybd /	scribbled	Y	Ρ	Y	Y	N	Y
\$ /kindri/	kindly	Y	Y	P	Р	N	Y
\$ / r a yr /	rear	Р	Ρ	Y	Y	N	Y
\$ / sub ð 1/	subtle	Р	Ρ	Y	Y	N	Y
\$ / di ya s/	digits	Y	Y	Y	Y	N	Y
/bigIni j/	benign	Р	Ρ	N	N	N	Y

Even with a familiarity of the phonemes that are distinctly German and with an intuitive knowledge as to when those phonemes might be imposed on an English word, there were some pronunciations which more closely approximated the given item in the text graphically and phonetically, but could not be termed 'dialect' because of the idiosyncratic and inconsistent nature of the pronunciation. It became a difficult task trying to determine whether such an item was a 'nonsense word', signaling a loss of meaning, or whether the reader recognized the item and

understood its meaning in the context of the story but simply did not have full productive control over its pronunciation. After consultation with Y. Goodman, it was determined that an extra parameter ought to be established, providing for phonological deviations of this sort by non-native speakers. Marking this type of item with a 'PP' under 'Semantic Acceptability' and 'Meaning Change' meant that the degree of comprehension and correct usage could not be fully determined although the degree of graphic and sound similarity was high. As phonological approximations of this sort are a natural part of learning a second language (especially for those who have had training which has emphasized the grammar-translation method, or reading and writing more than oral/aural work), they must be accounted for, without there being a subjective assumption as to the degree of meaning ascertained. Examples of this occurrence are:

/ægItešAn /	agitation
/kruk [/	crooked
/mIldli/	mildly
diplomet/	diplomat
/didand/	deadened

German language features other than phonological did not surface during the readings in English, despite the fact that a slightly antiquated, nineteenth-century English style of writing had been employed in "The Alchemist's Secret." There were few vocabulary variations, and none illustrated the example of cultural bias seen in the reading of 'headlights' for 'headlamps' as described by Goodman. The closest miscue of this sort was the use of 'glasslit shop' for 'gaslit shop' in three out of six instances, which may have been triggered by an anticipation for the concept of 'lamp' (glasslit) as opposed to the means by which the unmentioned lamp was fueled (gaslit). Another theory is that the 'l' of 'gaslit' was, as a feature, fixed upon during the apprehension of the word, and read out in the first morph of the word as well as the second; in this case, recognition of the error may or may not have occurred, leading us to speculate whether silent correction may have deleted it internally for efficiency's sake. Regardless, since 'glasslit' and 'gaslit' are not synonyms, and because the concept of 'gaslight' or 'Gaslicht' in German is comparable to that in English, this miscue is not registered as dialectal, but rather as phonological with a degree of meaning loss having occurred.

It is interesting to note that no major syntactic miscues which could have been influenced by German syntax were made in the English readings. There was only one minor instance of this: the possessive pronoun 'her' was read by a subject in place of 'its' with reference to a tortoise. The gender of 'tortoise' is actually feminine in German: 'die Schildkroete'. Still, when one considers the syntactic difference between the two languages with regard to word order, frequent morpheme separation of the verb, case, inflection, and gender (to name a few major areas of distinction) it is surprising to have had so little transfer of German language structure in the English readings. For instance, in no readings where introductory elements began a sentence --as with an adverb or a prepositional phrase --- were the verbs separated from the copulas and uttered at the end of a sentence. The positions of direct objects were not inverted with indirect objects; and adverbs

which indicated a combination of manner, place, and time were not re-arranged according to strict German form. All in all, lexical or syntactic language transfer, which, as mentioned, would have been analyzed under the heading of 'dialect', did not constitute an important aspect of the reading process for these second-language subjects.

The subjects' readings of German produced virtually no phonological miscues which could be attributed to dialect. This is not to say that particular phonological features do not exist which characterize the German spoken in the north from that of other regions. On the contrary, distinct phonological features do exist, such as the tendency to pronounce an initial consonant cluster 'st' at the beginning of a word [st] instead of the standard [St]. Germans in the northern sector of the country, around Hamburg, are also known to "broaden" and lengthen their vowels to some extent, rendering an [e] more like [e:]; and, as in all regions of the country, it is not uncommon for a final vowel before a final consonant in a word to be reduced to a [], or deleted altogether.

While this is just a cursory attempt to note several more distinct phonological differences which could have been reflected in the speech of the subjects, the point must be made that, apart from a generally reduced final vowel, none were evident - even in the retellings. Reasons for this can be fairly easily deduced. In the first place, all of the subjects are well-educated by German standards; every subject was in his penultimate or final year of the Gymnasium, the German equivalent of a high school which prepares students for the university. This fact alone is significant, in that the Hochdeutsch used in school and any "academic environment" disallows many of the spoken dialectal

features used in the community. Speakers simply change their speech register from a 'casual' to a 'formal' level, in the words of Martin Joos (1967). The second reason may be a corollary of the first: while the readings which the subjects undertook for the miscue inventory were not considered a test (this was emphasized at the time), the situation was in fact a formal one in that the readings were done aloud, before an unknown researcher, and a tape recorder. It is therefore understandable that those initial 'st' consonant clusters were pronounced according to the standard [St], and that formal features of Hochdeutsch were adhered to in every other respect as well.

Syntactically and lexically, some degree of dialectal change can be noted, although it, too, is infrequent. Three out of five subjects miscued when reading ". . . in <u>den</u> Jura hinein . . ." in line 0226 of the Hesse story. Rather, they read ". . . in <u>die</u> Jura hinein . . ." In all cases, the concept of mountains or 'Berge' is understood; 'die Jura' merely assumes the plural of mountains without requiring that 'Juraberge' be printed in the text. Likewise, the subjects miscued 40 % of the time when reading the following lines:

/me**jo**n/ 0113 Die kleineren Tiere erfroren in Menge . . . large numbers (The little ones animals froze in large number . . .)

/blutig@/
0316 Blutig rote Kreise wirbelten vor seinen Augen . . .
Bloody
(Blood-red circles whirled before his eyes . . .)

/unseglich**D**/ 0423 . . . die Hand des Todes wie eine unsaeglich schwere Last . . .

immensely

(... the hand of death like an immense, heavy burden ...)

In all cases, the deletion or addition of the final morph in the miscued word (be it a plural, adjectival or adverbial affix marker) does not alter the semantic or syntactic acceptability of the sentences. Both surface structures represent, ultimately, the same deep structure, and the basic intent of the author is left unchanged.

In summary, over three times as many dialect-attributed miscues were made in English as were made in German, although these were of phonological origin, for the most part, and represented the subjects' ever-increasing approximations of native English pronunciation. Syntactic and lexical miscueing, attributed to dialect, represented only .5 % of the total number of German miscues and a negligible percentage of the total number of English miscues. This indicates that spoken dialectal forms were not only inhibited, but virtually suppressed as the readers adhered very carefully to the written text in their reading. Again, the notion of a formal 'reading' register may account for this phenomenon. Further research would have to be done to bear out this theory and to accurately compare the degree of dialect used in the retelling component of the RMI with that of the reading component.

Intonation

The category for miscues with intonation involvement was closely associated with that of dialect for the subjects reading in English; this was not the case for their reading in German. Many of the items coded under 'Intonation' in English reflected an insecurity on the part of the subject with regard to the stress pattern of a pronunciation. In fact, even when the oral responses were phonetically correct or at least similar to the graphic print, a hesitation or questioning in the

voice could often be detected at the time the subject added stress. Sometimes the subject would repeat a word several times to try different stress patterns until he hit upon what he considered to be the appropriate one:



It is interesting to note that in 42 instances of misplaced stress while reading English, 27 of the attempts (or 64 %) were with stress placed on the first syllable of the word. While figures are not available to the researcher as to the degree, it is generally acknowledged that most polysyllabic words in German have the stress placed upon the first syllable. Stress on polysyllabic English words, on the other hand, varies considerably depending upon the number of syllables, the function, and the etymology of a given word (not to mention the context and dialect in which it is used). This unpredictability in the placement of stress appeared to be disconcerting to a number of the subjects, and the statistics bear this out. In all German readings, only 9 miscues of intonation were made, and only 4 of those were due to misplaced stress, or approximately one-tenth of the number made in English.

The other 5 miscues of intonation made in German were examples of incorrectly placed direction markers in the speech melody, which indicated

the end of a sentence when there was none, or a continuation when a pause was called for. In the reading of English, 4 such misplaced direction markers were coded as miscues, one of which was corrected. This leads one to conclude that miscues of this nature are fairly evenly spread throughout oral reading, despite the language being used.

To summarize, then, slightly more than five times as many intonational miscues were made in English as were made in German, most of those having to do with misplaced stress in a polysyllabic word. While meaning change can be affected by an incorrectly placed stress marker (/ritorts/ in place of /ritorts/, for example), such a miscue was marked 'PP' in the meaning change category. This indicated that the researcher could not evaluate whether a meaning change had occurred for the reader who was unfamiliar with appropriate pronunciation factors in English, but who may have syntactically and semantically comprehended what he was reading in the context of the story.

Altered direction markers in speech melody often affected meaning, by orally changing punctuation and running sentences together or cutting them short. Again, as the phenomenon of miscueing melodic direction markers occurred nearly as frequently in one language as it did in the other, it would appear that it is common to the reading process itself, and that it represents miscalculations of what the reader anticipates as he reads for meaning.

Grapho-Phonic Proximity

Goodman and Burke noted a tendency for a slightly higher graphic proximity to the expected oral response than a phonetic proximity, among their 94 native English subjects from Detroit (1973). P. Rigg

completed a miscue analysis on 9 subjects from two differing regions of the United States (Detroit, Michigan and Port Gibson, Mississippi), and found much the same thing. While these students were primarily concerned with Black dialectal features and their effect on reading for comprehension, some comparisons with the present study can be drawn.

This analysis of German subjects reading in English and their native language found, also, that graphic proximity ranked higher than sound proximity, in both languages. Table 5 reveals that this is true not only for language groupings as a whole, but for individual readers -- with one exception (ST in English) -- as well.

TABLE	5
TRDLE	J

GRAPHIC/SOUND PROXIMITY AND RETENTION OF MEANING

Subjects	Graphic-%	German Sound-%	N/MCh-%	Graphic-%	English Sound-%	N/MCh-%
AN	61.5	46.1	46.1	96	88	51.9
BE	79	73.7	71	56.2	52.1	25
KL	60	60	36.4	80.6	71	29.8
KR	66.7	61.9	70.4	93.6	83	46.8
LA	65.9	65.9	67.8	83.6	75.4	62.4
RI	68.2	68.2	65.4	87.1	74.2	65.6
ST	65.7	65.7	64	68.5	72.2	33.8
Averages	66.7	63.1	60.2	80.8	73.7	45

It should be observed that the graphic proximity is approximately 14 % higher in English than it is in German; likewise the sound proximity is

approximately 10 % higher in English than in German.

Thus, while all subjects' observed responses were closer to the expected response graphically than in sound (approximately 7 % difference in English and 4 % difference in German), there is a substantially greater reliance on the graphic features in English than in German. This fact is, in itself, not surprising. Because English is the second language and much of the vocabulary, if not the syntactic structure, is less familiar, one might have predicted that there would be a greater attention to critical graphic features. But the degree of increased attention is significant. It is clear that the greatest proficiency in reading comes as a result of the trade-off between grapho-phonic, syntactic, and semantic cues which allow, as a result of redundancy, the selection of only that minimal number of cues necessary for identification and comprehension. The substantially greater degree of graphic proximity in English may indicate that, in fact, there is over-reliance on this single cueing component, at the expense of greater apprehension of meaning.

The only way to fully determine this is by looking closely at the category of 'Meaning Change' for both languages, to assess how little or great the occurrence of meaning change was as a result of miscueing. The N/MCh column on Table 5 reflects the percentage of miscues that do not change the meaning of the sentence or the author's intent. The results are highly idiosyncratic, ranging from 36.4 % to 71 % in German, and from 25 % to 65.6 % in English, for individual subjects. But the degree of 'no change' in meaning averages 60.2 % and 45 % respectively for the two languages. Conversely, then, a partial or full loss of meaning is incurred in 39.8 % of all German miscues and in 55 % of all

English miscues. It is obvious, therefore, that the intended meaning of the author in the English readings is changed considerably more than it is in German, despite -- or possibly because of -- the conscious and consistent proximity to graphic features displayed by the readers in English.

One might wonder at the discrepancy between the average percentage of sound similarity in German as opposed to that in English. It is, as has already been established, 14 % greater in English than in German. This appears to contradict the widely held but untenable position that a closer phonetic correspondence to print, which German has as compared with English, can be dealt with more easily and accurately by the reader. In fact, after comparing the degree of grapho-phonic proximity to the amount of retention of meaning in each language, it should be clear that graphic/sound relationships have no bearing on the process of reading for meaning. The implications of this point will be explored later in this analysis.

Grammatical Function

The analysis shows that, for all miscues made, the majority of substituted words have the same grammatical function as that of the expected response. A full 83.2 % of German miscues had an identical function as the textual item; 89.6 % of English miscues followed the same pattern.

There is a problem in dealing with the question of grammatical function, however, when the miscue analysis is undertaken with the short form of the Goodman/Burke model. Function is marked as being 'fully identical', 'not identical', or 'not determinable' (an example of the

latter would be a nonsense word with a lack of inflection or contextual clue as to its syntactic function). And yet, a finer differentiation needs to be made to compare the relatively small number of grammatical function miscues with the expected responses. It would, for instance, be interesting to determine if a particular word class was consistently substituted for another, when the grammatical functions are differing. While this corollary analysis will be left for the future, it was within the scope of this study to see what classes of words caused the highest number of miscues overall. Within the confines of this study, most such grammatical function miscues were contentives, which primarily include nouns, pronouns, verbs, adjectives, and adverbs. The miscues from the English readings are 85 % contentive whereas those from the German readings are 75 % contentive. One should note that the broken-down percentages of these categories of miscues are virtually the same in English as in German.

TABLE 6

GRAMMATICAL FUNCTION MISCUES BY CONTENTIVES

Турев	German	English	
Nouns	22 %	33 %	
Pronouns	9 %	6 %	
Verbs	23 %	22 %	
Adjectives	15 %	18 %	
Adverbs	6 %	6 %	
Total	75 %	85 %	

There is one major difference, however; nouns are one-third less likely to constitute a miscue in German than in English. On the other hand, the structure-word category of articles in German outranks that of English as a source of miscueing by almost 4 to 1 (11 % in German; 3 % in English). One can begin to recognize that specific features of a language can play a large part in creating an 'environment' for miscues. The article in German is a much more complex word class than it is in English; whereas the definite article 'the' is used in a single form for all grammatical situations in English, the German definite article must change according to the case, number, and gender of the accompanying noun. Thus, the German article takes a particular form in sixteen different grammatical situations.

While adherence to the proper form of an article is important in German writing, it is recognized that the article will not always be kept parallel to the noun in oral discourse or in reading. The situation is analogous to the requirement of subject/verb agreement in English. However, it must be acknowledged that the potential for miscueing increases as acceptable variations in the surface structure create more complex syntactic arrangements.

The result is that the speakers of a given language tend to be tolerant at least to some degree of miscueing that is syntactically oriented. This is particularly true in the reading process where predictions and tentative hypothesizing of syntactic structures are constantly employed, and where reading for meaning may make it too inefficient to orally correct.

To summarize this section, both German and English readings reveal that miscues are generally of the same grammatical function as the

expected response, although the figures show that there is more of this tendency in English than in German. Figures also establish that content words are substituted or miscued more frequently than are structure words, regardless of language. Additionally, while nouns represent less of a potential for miscues in German than in English, the percentage of miscued articles and nouns taken together in German compares statistically with the number of miscues involving English nouns.

Correction

The overall correction rates of oral miscues by individual and by language group are surprisingly different when compared with one another. Table 7 illustrates to what degree the variation exists.

TABLE 7

			·····
Subjects	German	English	
AN	50 %	20.7 %	
BE	50.8 %	21.5 %	
KL	8.3 %	22.5 %	
KR	73.7 %	32.7 %	
LA	29.3 %	19.7 %	
RI	51.9 %	44.1 %	
ST	33.9 %	24.3 %	
Average	42.6 %	26.5 %	

OVERALL CORRECTION RATES

In German, the individual rates of correction range from 8.3 % to 73.7 % of all oral miscues made, whereas, in English, the range is much smaller; from 19.7 % to 44.1 %. The average percentage of correction is 42.6 % in German which compares with only 26.5 % in English.

The much higher rate of correction in German as opposed to English could be accounted for by recalling that most German and English language miscues involve contentives, for which there may be a considerable lack of familiarity in the second language. Indeed, the residual MPHW findings noted earlier in this chapter show that nearly three times as many semantically unacceptable deviations were made in English as were made in German -- a fact which would seem to support this idea. (One could also add to the 'semantically unacceptable' category those dialect miscues which were designated 'PP' under 'Meaning Change', because of the impossibility of determining how much, apart from a phonetic description of a word, the subject comprehended).

It can be seen statistically that in English subjects corrected grammatically unacceptable miscues more readily than semantically unacceptable miscues, whereas in German the opposite was true (Table 8).

However, the tremendous, unpatterned spread of correction percentages among the individual readings in English, when compared with individual syntactic and semantic unacceptability rates (residual MPHW), leaves one without an explanation as to why or how each rate of correction was established. It appears that there is actually no correlation whatever between the rate of correction and the rate of semantically unacceptable miscues (residual MPHW), when they are analyzed person by person in either language. All that can be said is that, for each individual subject, the rate of correction is higher in German (except

in the case of KL) and the rates of MPHW and residual MPHW lower than in English. Similarly, the higher rates of MPHW and residual MPHW appear to result in a lower rate of correction in English (KL excepted).

TABLE 8

	Ger	man	English
Subjects	Grammar	Semantics	Grammar Semantics
AN	33.3 %	60 %	100 % 50 %
BE	25 %	28.6 %	0 % 4.2 %
KL	0 %	0 %	28.6 % 20 %
KR	33.3 %	50 %	33.3 % 22.2 %
LA	0 %	22.2 %	0 % 6.3 %
RI	0 %	33.3 %	33.3 % 25 %
ST	0 %	14.3 %	23.1 % 12.5 %
Average	13.1 %	29.8 %	31.2 % 20 %

RATES OF CORRECTION FOR GRAMMATICALLY AND SEMANTICALLY UNACCEPTABLE MISCUES

What cannot be accounted for, as has been casually observed earlier in the study, is the rate at which there may have been 'silent' or internal correction going on for semantically and syntactically unacceptable miscues during the reading process itself. This factor cannot enter into the statistics, and yet one can be reasonably certain that it is an important strategy in the reading of an individual like BE. In this particular case, there was a 4.2 % rate of correction for semantically unacceptable miscues, and a 0 % correction rate of grammatically unacceptable miscues in English. And yet, with the highest rate of miscues (per hundred words) of anyone else in the study, she still attained the second highest rate of retelling comprehension. For the sake of efficiency, many miscues had to have been eliminated at a deep structure level, which verifies that BE was reading more for meaning than for surface structure accuracy.

In summing up, while the correction rate is higher for German than it is for English, both on an individual basis and as a language group, no clear-cut correction pattern can be discerned because of the considerable variations among individual rates. It appears that idiosyncratic and seemingly unobservable factors play a part in the correcting process. Furthermore, while grammatically unacceptable miscues are more likely to be corrected than those which are semantically unacceptable in English, just the opposite holds true in German.

Syntactic and Semantic Acceptability

When reviewing the syntactically acceptable miscues made during the readings in both languages, a very interesting phenomenon can be seen to take place from one half of the story to the other (Table 9). In the case of German, all of the subjects average a rate of 68.3 % grammatical acceptability in the first half of their readings, but this figure is reduced by 5.2 % in the second half. When reading in English, however, the subjects begin with a very high average of 75.1 % grammatical acceptability, and they continue to accelerate another 4.2 % until they reach an average rate of 79.3 % grammatical acceptability as a group. Therefore, while individual scores will vary from one half of a story to another, the general trend is for grammatical acceptability to be higher in English than it is in German, and to remain that way throughout the reading process.

TABLE 9

	Germ	an	Engl	.ish
Subjects	lst Half	2nd Half	lst Half	2nd Half
AN	87.5 %	20 %	87.5 %	90.9 %
BE	72.7 %	81.8 %	68.2 %	61.8 %
KL	33.3 %	50 %	68.4 %	83.3 %
KR	70 %	70.6 %	86.9 %	79.2 %
LA	81.8 %	76.5 %	82.1 %	90.2 %
RI	70 %	81.2 %	78.9 %	76.9 %
ST	62.5 %	61.5 %	53.6 %	72.7 %
Average	68.3 %	63.1 %	75.1 %	79.3 %

FIRST/SECOND HALF SYNTACTIC ACCEPTABILITY RATE

In attempting to explain this phenomenon, one must recall the degree to which graphic features are also relied upon in the reading of English as opposed to German. Previous data have shown that the graphic proximity of all English miscues is 14 % higher in English than in German, which indicates that much closer graphic attention is being given to the English text than to the German. As a result, a German miscue might retain enough of the necessary semantic and syntactic qualities to fit the context of a reading passage, but it could easily have very little graphic or sound similarity with the expected response, particularly if the miscue is a substituted lexical item. Similarly, with full control of a variety of syntactic surface structures which could all convey the same underlying deep structure, the native German speaker is quite capable of deviating from the German text syntactically while still retaining the semantic import of the message being read, and this is indeed frequently found to happen. But because the second-language reader may feel less competent in anticipating or recognizing the wide range of alternative surface structures for any given utterance's underlying deep structure, he may find himself reading the English text much more closely than he would in his own language to 'decode' the particular syntactic structures given for complete accuracy.

An analysis of semantic acceptability completely reverses the figures, however. Whereas the subjects' attempts in English show a consistent and substantial increase in semantic acceptability from the first half to the second half of their individual readings (the group as a whole averages a full 19.7 % increase by the end of the reading), the individual English rates of semantic acceptability are still lower, in general, than those of German (Table 10).

The percentages of change in semantic acceptability, as the subjects complete both halves of the German reading, vary considerably from individual to individual -- though not as radically as they do for syntax. In the case of AN the rate of semantic acceptability actually dropped by 30 percentage points, whereas BE was able to increase her rate of semantic acceptability by 11.2 % in the course of the reading. Taken as a group, the reading in German reflects a slight decrease in the percentage of semantically acceptable miscues made from one half of the story to another; nonetheless, semantic acceptability in German begins

a full 25.3 % above the English rate and drops only 2.4 % overall.

TABLE 10

	Ger	man	Engl	ish
Subjects	lst Half	2nd Half	lst Half	2nd Half
AN	50 %	20 %	43.8 %	63.6 %
BE	63.6 %	75.8 %	18.2 %	29.4 %
KL	33.3 %	25 %	31.6 %	44.4 %
KR	70 %	70.6 %	21.7 %	37.5 %
LA	63.4 %	61.8 %	42.8 %	61 %
RI	60 %	62.5 %	36.8 %	69.2 %
ST	45.8 %	53.8 %	14.3 %	42.4 %
Average	55.2 %	52.8 %	29.9 %	49.6 %

FIRST/SECOND HALF SEMANTIC ACCEPTABILITY RATE

Again, an explanation for such a difference in acceptability might be the often very close attention given the text by the second-language reader. Whereas the subject often substitutes lexical items freely, and still retains semantic acceptability when reading in his own language, he is more likely to attempt to 'sound out' phonetically a lexical item in the second language that he is unfamiliar with, rendering it a nonsense word and semantically unacceptable.

In summarizing this section, it can be seen that overall grammatical acceptability is higher in English than in German by 6.8 % in the first half, and a full 16.2 % in the second half of the readings. Also, while the rate of syntactic acceptability increases in the second half of the English readings by an average 4.2 % over the first half, the rate of syntactic acceptability actually decreases from one half to the other in the German readings by an average 5.2 %.

No significant change in semantic acceptability can be noted from one half of the German readings to another, although individuals vary to some degree, either up or down. English semantic acceptability, on the other hand, increases significantly from the first to the second half of the readings, and uniformly so for each individual. Still, the overall rate of German semantic acceptability remains higher than that of English, which indicates the possibility of a comprehension base that is more extensive in the native language.

Meaning Change

Table 11 in fact establishes the truth of the preceding assumption. It illustrates the degree to which the readers' oral miscues retain the ultimate sensibility and intention of the author; therefore, the percentages given below simply indicate '<u>no</u> meaning change'.

When the subjects undertook the readings in German, the degree of 'no meaning change' (or retention of meaning) varied with the individual, as it has for the semantic and syntactic acceptability rates outlined above. Three out of the seven subjects suffered a drop in the rate of 'no meaning change', and in each case the drop was by at least 10 percentage points, or close to that figure; the other four subjects enjoyed an increase of at least 6 percentage points. But while the degree of 'no meaning change' for individual German readers does not provide a distinct pattern which can be readily compared with syntactic and semantic acceptability rates, a tendency does exist for 'no meaning change' percentages to mirror rising or falling semantic acceptability rates in the second half of a reading.

TABLE 11

FIRST/SECOND HALF 'NO MEANING CHANGE' RATE

	Ger	man	Engl	ish
Subjects	lst Half	2nd Half	lst Half	2nd Half
AN	50 %	40 %	43.7 %	63.6 %
BE	59.1 %	78.8 %	22.7 %	26.5 %
KL	66.7 %	25 %	21.1 %	38.8 %
KR	60 %	76.5 %	34.8 %	58.3 %
LA	63.6 %	70.6 %	57.2 %	65.8 %
RI	70 %	62.5 %	68.4 %	61.5 %
ST	58.4 %	69.3 %	27.6 %	39.4 %
Average	61.1 %	60.4 %	39.4 %	50.6 %

For the group as a whole, it is evident that the rate of 'no meaning change' stays relatively stable in German, decreasing only by .7 % from the first half to the second half of the reading, which, again, resembles the average decrease in semantic acceptability seen in Table 10.

Likewise, in English, the degree of 'no meaning change' miscues reflects the tendency to stay closer to the semantic acceptability figures than to those of syntactic acceptability. Just as all individual English rates of semantic acceptability increase consistently in the second halves, so, too, do all individual rates of 'no meaning change' (except one; RI). Moreover, there is a substantial gain in the group's average rate of 'no meaning change' for the second half of a reading, which confirms the same trend established in Table 10.

There are three points, then, which could be made in summing up this section of the analysis. In the first place, there is no dramatic change in the number of miscues that measure meaning retention from one half of the German readings to another. The degree of semantic acceptability in German also stays relatively the same (actually dropping by 2.4 %). Secondly, all subjects reading in English appear to improve the quality of their miscues as they progress through their stories, in that the percentage of semantically acceptable and meaning-retaining miscues continues to increase. Finally, it appears that, while the number of high-quality 'no meaning change' miscues increases as the subjects read in English, the highest degree of 'no meaning change' is still maintained in the native language.

Conclusions

Results from the categories of grammatical acceptability, semantic acceptability, and meaning change are very closely interrelated, and together they provide much of the framework for determining how proficient a reader is. This section will attempt to put into perspective the statistical information gathered on the individual English and German readings and retellings, so as to answer the question posed at the beginning of the chapter: "How can such a large degree of comprehension be manifest in the German subjects' reading of English, <u>despite</u> the number of miscues made -- so many of which appear to destroy the semantic

intentions of the text ?"

The fact is that, while twice as many miscues were made in English as in German, and while three times the number of these miscues are of 'low quality', or semantically unacceptable, much of what the subject is doing as he reads in English appears to compensate for this.

We have already established that the subjects' oral miscues in English are, on average, 79.3 % syntactically acceptable by the second halves of their reading. They are also 49.6 % semantically acceptable and 50.6 % free of meaning change, by the second half. Thus, although the subject may have run into a "great deal of nonsense" (Frank Smith, 1972), and has made numerous 'low quality' miscues with which he must contend, he is simultaneously seeking to 'make sense' of his reading wherever he can. The most obvious strategies employed by the individual subject in his attempt to extract meaning from the English text are:

- Reading primarily for grammatical structures that are complete and that can bear meaning, by
 - a) replacing substituted or miscued lexical items with others of the same function, and

b) correcting ungrammatical miscues where they interfere with semantics.

Attempting to gain semantic control of the reading, by

 a) creating a semantic 'buildup' from one half of the story to
 the other, and

b) increasing the quality of semantic miscues during the course of reading.

3. Keeping close to the graphic representation of the text, bya) attempting to maintain a close graphic/sound relationship to

the lexical items while reading aloud, and

b) observing the syntactic structures used by the author, and adhering to them in the effort to get to deep structure.

All of the strategies noted above are useful when the subject is allowing for an even 'trade-off'. In other words, the emphasis cannot be placed exclusively on any one of the three major language systems being used -- syntax, semantics, or grapho-phonics.

Wherever 'low quality' miscues are observed in quantity, a shift has taken place, such that the focus appears to be primarily on strategy 3. The result is an oral response to the text that approximates it according to graphics, sound, and even grammatical structure, but not according to semantic sensibility. The subject may be attending to the graphics so much that he 'loses the thread', or semantic buildup, of what he is reading.

In the end, the only sure method of determining whether or not semantic buildup and, ultimately, full comprehension has resulted is by reviewing the subjects' retelling scores, and comparing them with the statistical information on their miscues.

Table 12 illustrates a fact which has already been discussed briefly. While grammatical and semantic acceptability rates, along with comprehension scores, are indicative of how much comprehension may have taken place, retelling scores do not necessarily give completely parallel results. Analyzed together, however, a comprehensive profile of the individual subject's reading can be made.

Subjects AN and KL have the least number of miscues in the study, and, as a result, have somewhat distorted scores for grammatical and semantic acceptability rates. Their retelling scores, however, reveal

TABLE 12

*GRAMMATICAL/SEMANTIC ACCEPTABILITY AND RETELLING RATE

Subjects	Grammar	German Semantics	Retelling	Grammar	English Semantics	Retelling
AN	61.5 %	38.5 %	99.4 %	88.8 %	51.9%	93.8 %
BE	78.2 %	70.9 %	80 %	64.3 %	25 %	88.8 %
KL	45.5 %	27.3 %	92.5 %	75.7 %	37.8 %	83.8 %
KR	70.4 %	70.4 %	97.5 %	83 %	29.8%	58.8 %
LA	78.6 %	62.5 %	85 %	86.9 %	53.6%	58.8 %
RI	76.9%	61.6 %	82.5 %	78.1 %	50 %	63.8 %
ST	62 %	50 %	58.8 %	63.9 %	29.5 %	45 %
Average	67.6%	54.5 %	85.1 %	77.2 %	39.7 %	70.4%

that they are indeed gaining meaning from their readings in a way that is unimpeded by the number of 'low quality' miscues. Their retelling rates are among the three highest both in German and in English; their residual MPHW percentages rank as the lowest in German and are among the three lowest rates in English. Thus, they are the most proficient readers of the group for both languages.

KR, LA, and RI have similar residual MPHW's in German, and their grammatical and semantic acceptability rates are also within a comparable range (within approximately 8 % of each other). Their German retellings, however, show a difference in proficiency. Whereas LA and RI score 85 % and 82.5 % respectively, KR scores 97.5 %. In English, the grammatical acceptability rates are within approximately 8 % of each other, but semantic acceptability rates show KR to drop 20-24 % below the other two. Only when looking at the retellings does one see that, in fact, their reading proficiency levels are similar. KR scores exactly as well as LA in the retelling and only 5 % lower than RI. Obviously, KR's semantic acceptability rate does not reflect the apparent internal correction or cognition of a number of items that showed up as oral miscues when she read aloud. In other words, even though the miscue statistics would seem to suggest considerable variance, the three subjects KR, LA, and RI all prove to be moderately proficient readers in English. It is possible, and intriguing, to speculate that the same degree of internal correction may account for KR's considerably higher German retelling score, despite the relatively close parallelism between her, LA's, and RI's semantic acceptability rates.

BE's reading has already been discussed at some length. She is the one subject whose English retelling score stands diametrically

opposed to her other English reading scores in the analysis. BE's residual MPHW is the second highest of the German readings and the highest of the English readings, indicating that a very large number of 'low quality' miscues is being generated. This is particularly interesting in view of the fact that she has a relatively high number of miscues per hundred words in both languages. But her grammatical and semantic acceptability rates in German are actually quite high. which may be the reason why she scores a respectable retelling score of 80 %. BE's grammatical acceptability score in English is the second lowest of the group, however, and her semantic acceptability rate is the lowest of all (less than half of AN's). It is because of this that her English retelling score is remarkable -- 88.8 %, or the second highest of the group. This situation is all the more surprising when her English scores are compared to those of ST. There is a close correspondence between BE's and ST's MPHW, residual MPHW, comprehending score, and grammatical and semantic acceptability rate. Indeed, all percentage scores are within 4.5 % or less of each other, and yet, BE's English retelling score exceeds that of ST by a full 43.8 %. Possible reasons for the discrepancy have been put forward, suggesting that BE may have learned somehow to circumvent the large number of unacceptable semantic miscues she makes in oral reading by concentrating, instead, on structural features. The more plausible explanation, however, is that BE silently corrects much of what she reads for efficiency's sake, and that these corrections cannot be seen in her oral reading scores. Thus, BE is actually a much more proficient reader than we might have otherwise expected.

The results show that ST is reading least proficiently in both

German and English. His MPHW is the third highest rate in German at 4.7, and his residual MPHW is the highest rate at 2.5. His grammatical and semantic rates of acceptability are somewhat closer to the group average, at 62 % and 50 % respectively; but ST's retelling score confirms that he is not reading primarily for meaning. The lowest of all German retelling scores, ST's rate is only 58.8 % -- well below the group average of 85.1 %. ST's English percentages do not fare better. His MPHW and residual MPHW rates are the second highest, at 8.4 and 5.9 respectively. Furthermore, grammatical and semantic acceptability percentages are the lowest and second lowest at 63.9 % and 29.5 % respectively. ST's English retelling score serves to substantiate the lack of cognition that is occurring; it registers at only 45 %, or 25.4 % below the group average. It would be interesting to know what impediments are most influential in keeping ST from comprehending more of what he has read. While the act of cognition is one upon which we can only speculate, it appears that ST is unable to deal with his numerous miscues and high residual MPHW's, like BE, by correcting internally. ST's 'low quality' miscues accumulate from one half of the text to the other without being consistently recognized and resolved, such that he eventually stops reading primarily for meaning and, instead, reads for surface structure accuracy. This is verified by the fact that ST's miscues are approximately 20 % higher in sound similarity and approximately 12 % higher in graphic similarity than BE's comparable scores. Also, his syntactic acceptability rate actually rises by about 20 % in the second half of his reading, whereas BE's syntactic acceptability rate drops by about 7 %. Thus, it appears that ST's attention to structure at the expense of meaning is his biggest liability.

While the study needs to have its findings confirmed with more extensive research on a larger number of subjects, the results do suggest a general correlation between the proficiency with which the German subjects read in their native language and in English.

Further, the more proficient readers in both languages appear to be producing relatively low residual MPHW's while maintaining relatively high rates of grammatical and semantic acceptability, particularly in the second halves of their readings, or else show evidence of internal correction.

Finally, the projected comprehending scores based on the number of semantically acceptable or 'high quality' miscues appear to be less accurate measures of actual comprehension than the information gathered from MPHW, residual MPHW, syntactic acceptability, and retelling scores.

CHAPTER IV

PEDAGOGICAL IMPLICATIONS

The conclusions drawn from the analysis lead the investigator to suggest some implications for the teaching of reading to the second-language learner.

In the first place, the English instructor should be aware of the reading patterns and proficiency of the student in his native language, whenever this is possible. Results of this analysis have shown that proficiency in reading English is related, to a considerable extent, to the degree of proficiency shown by a subject in processing written material in his first language. It is obvious that the proficiency level in the second language is never likely to be as high as that in the native language (unless the individual is, or becomes, truly bi-lingual); the significance of the findings resides in the fact that parallel <u>relationships</u> exist between reading strategies employed in both languages. (One will recall, in this context, how closely the rate of contentive function miscues coincided in the two languages).

Therefore, while the second-language instructor may not speak the student's native language and may find it difficult to obtain information on his student's native reading proficiency, he has an obligation to look beyond the parameters of English to establish a profile of the strengths and weaknesses the student may have in processing <u>written</u> language in general. The universals of reading dictate that the

primary purpose of reading is comprehension, and that this, in turn, is achieved by making use of at least two fundamental language subsystems -- syntax and semantics -- to arrive at a deep structure apprehension of surface structure forms.

In establishing how well the student is processing and comprehending written material, the focus must be on the manner in which the syntactic, semantic, and grapho-phonic (in the case of oral reading) language systems are being used and integrated. The RMI, as a diagnostic device, is especially suited to determine this because of its emphasis on the natural phenomenon of miscueing and the cognitive activity it involves.

In assessing the results of miscue analysis, the instructor should be cognizant of the following assumptions about proficient reading:

1. The student must be bringing his prior knowledge and experience to bear on the reading for optimum semantic sensitivity. In other words, the student needs to know that prediction and anticipation are a vital part of the reading process; that it allows one to gain meaning more easily. This requires some risk-taking since syntactic structures may not be fully recognized, individual lexical items may not be fully apprehended semantically, and grapho-phonics may not always be providing the necessary information for acceptable pronunciations in a given oral reading. And yet, based on the hypothesizing, testing, predicting, and confirming strategies discussed at length by Goodman (1970), the student can be actively involved in making all the necessary distinctions for himself which give print meaning. His own core of knowledge and experience

extend to an understanding of language and its universal structures which cannot be overtly taught, but which can be tapped in dealing with the second language.

2. The instructor cannot assume that the number of miscues in a student's oral reading has, by itself, any bearing on his ability to read for meaning. Once again, the example of BE and ST is instructive in this context. Despite BE's 65 German miscues, and despite the fact that her German retelling score, at 80 %, is the second lowest in the group, the latter figure nonetheless demonstrates a high rate of comprehension. On the other hand, ST's German retelling score of 58.8 % is dramatically lower than BE's, even though ST has a total of only 56 miscues in German. Also, it was noted earlier that those individuals who have relatively fewer miscues (less than 55) in English make approximately 57 % in the first half and about 43 % in the second half of the reading. Conversely, those with a relatively large number of miscues (more than 55) make 45 % of them in the first half and 55 % of them in the second half of their readings. An explanation of this curious fact might be that those with fewer miscues tend to build up an 'acclimatization' to the text, with regard to style, vocabulary, structure, and meaning, at a faster rate than the subjects with more miscues. But it has already been established that internal correction may be taking place among subjects with the larger number of miscues, and that their rates of comprehension can be as high -- if not higher -- as those who maintain less than 55 miscues throughout their reading. It has been demonstrated that miscues

are generated for numerous reasons, and that they must be evaluated qualitatively, not quantitatively. Much more significant than the total number of miscues made by an individual is the rate of residual MPHW or the number of 'high quality' miscues, because of these rates' direct impact on meaning and the possibility of meaning change.

Grapho-phonic miscues, however, do not pose nearly as serious a problem for the reader since it is understood that the semantic component of language, at the deep structure level, is not directly related to the phonological component which is restricted to the surface structure.⁷ Indeed, the foreign student can have a very clear conception of the lexical item he is reading orally, but the pronunciation of the word may exceed the boundaries of grapho-phonic acceptability for English. Thus, as Y. Goodman notes, parameters must be enlarged so as to account for the successive regularizations and approximations of this sort, on the part of the second-language learner.

3. Students must learn to be graphically selective as they read. They should be taking in only those minimal graphic and syntactic cues that are necessary for comprehension, since a concentration on semantics and a buildup of the intended meaning are primary to the reading process.

While much of second-language instruction requires that the student focus strongly on language structure, form, pronunciation, and graphic representation, reading instruction must do otherwise if true proficiency is to result. Only when students learn to make use of the vast amounts of syntactic and graphic
redundancy available to them, and to attend to only the most critical of graphic features found on the printed page, can their chances for making sense out of what they read be great.

But the instructor need not try to teach all such selectivity overtly; learning about and distinguishing between such critical features is often an unconscious process, and consistent and varied exposure to written English will provide the environment for the necessary distinctions to be made.

The ultimate purpose of reading instruction, then, is to orient the student towards an active involvement with the text. This is as true for the native speaker of English as it is for the second-language learner. The student should be drawing on his knowledge and experience, predicting and hypothesizing about the text before him, and selecting only those graphic and syntactic elements that will help him confirm his hypotheses. Meaning will then become apparent.

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NOTES

- ¹William E. Norris, "Advanced Reading: Goals, Techniques, Procedures," in Kenneth Croft, <u>Readings on English as a Second Language: For</u> <u>Teachers and Teacher-Trainees</u>. Cambridge, Mass.: Winthrop Publishers, Inc., 1972, p. 189.
- ²Frank Smith, <u>Understanding Reading: A Psycholinguistic Analysis of</u> <u>Reading and Learning to Read</u>. New York: Holt, Rinehart, and Winston, Inc., 1971, p. 12.
- ³Lloyd Eric Reeve, "Caged." Scott, Foresman and Company, 1961. Arthur Gordon, "The Alchemist's Secret." Scott, Foresman and Company, 1961.
- ⁴Ian C. Loram and L.R. Phelps, eds., <u>Aus unserer Zeit: Dichter des</u> Zwanzigsten Jahrhunderts. New York: W.W. Norton and Company, 1972.
- ⁵Roswitha E.W. Schwartz, "An Exploratory Effort to Design a Readability Graph for German Material." Unpublished paper, State University of New York at Albany.
- ⁶Six of seven subjects read "The Alchemist's Secret" by Arthur Gordon; the remaining subject read "Caged" by Lloyd Eric Reeve. Five of seven subjects read "Der Wolf" by Herrmann Hesse; the remaining two subjects read "Das Maerchen der Maerchen" by Wolfdietrich Schnurre.
- ⁷Judith Greene, <u>Psycholinguistics: Chomsky and Psychology</u>. Harmondsworth, Mddx., England: Penguin Books, Inc., p. 56.

APPENDIX A

EXAMPLE OF MARKING SYSTEM USED BASED ON

GOODMAN/BURKE TAXONOMY

Marking System

∧ -- indicates insertions.

word/s -- indicates omissions.

- word/s word/s -- indicates reversal of words, phrases, or word endings between words.
 - (AC) -- indicates abandoning a correct response and substituting an incorrect one.
 - (R)-- indicates a regression or a repetition of a portion of the text for the purpose of dealing with material coming up in the text.
 - C-- indicates a successful correction.
 - UO -- indicates an unsuccessful correction.
 - (1)-- indicates a shift in intonation for a word or phrase.
 - d -- indicates the use of the reader's dialect; also indicates consistent phonological features of Germans reading English.

All substitutions were recorded above the items as they appear in the text. Multiple attempts were marked 1, 2, 3, and so on. The dollar sign (\$) was used to indicate nonsense words. Phonetic transcriptions were used to represent the observed response as it deviated from the expected response.

APPENDIX B

A GUIDE TO RETELLING FOR "THE ALCHEMIST'S SECRET" 1. CHARACTERS IN THE STORY

Recall

Dr. Maximus Unnamed Visitor

Wife of the Visitor Pechoff Admirers; one in particular Character Development Dr. Maximus proprietor of a herb shop unscrupulous appears proper, collected poisons people for a handsome sum (implied only) Unnamed Visitor wealthy, influential Parisian nervous, unsettled Wife of the Visitor beautiful, generally admired has affair with one particular admirer desires divorce only referred to in story

Pechoff foreign diplomat recommends Dr. Maximus to visitor only referred to in story

Admirer attracted to visitor's wife only referred to in story

2. CONTENT

Events

30

A man goes to a tiny, gaslit herb shop in the backstreets of Paris to consult Dr. Maximus about his services. He brings along a package of candy.

After introducing himself, the man relates how he was referred to the Dr. by a foreign diplomat, Pechoff, who had used the Dr.'s services himself. Maximus notes that Pechoff's wife had died suddenly; the visitor adds that an autopsy had revealed nothing.

70

15

15

The visitor discusses his wife's love affair; she wants a divorce. Maximus declines to hear the details, which angers the visitor. He abruptly hands the Dr. the box of candy for 'improvement', and asks that it be sent to his wife as from an admirer.

Maximus names a steep price and is paid in gold; he is noncommittal about the date of delivery. Asks for address and hands visitor a number to refer to if difficulties were to arise.

The man, apparently distressed at the thought that the procedure might be painful, is reassured and offered some sleeping pills. The visitor declines, mentioning his habit of a hot grog at night. He leaves. Maximus looks at his records which show that customer 321 had ordered "6 drops of elixir to be administered in husband's hot grog at bedtime." He calmly prepares the order, intending to post the candy in the morning. He will keep his commitment; however, his motto is "First come, first served."

Additional Information

The terms <u>poison</u>, <u>murder</u>, <u>kill</u>, <u>contract</u> etc. are never used in the story. All is implied.

Cool October evening in Paris, 1890's; dark shop, dim shelves; a tortoise and stuffed crocodile stare out of the shop at the visitor.

While Maximus <u>might</u> have performed alchemy 500 years earlier, his is now a subtler alchemy -- changing dreams into reality for a price.

Plot

20

How will Dr. Maximus' skills be employed to remedy a fallingout between a wealthy Parisian and his beautiful wife ?

Theme

20

"First come, first served." "Treachery breeds treachery."

APPENDIX C

EXAMPLE OF THE CODING SHEET BASED ON

GOODMAN/BURKE TAXONOMY

SHORT FORM

1 Dialect

yes no

2 Intonation

yes no

3 Graphic Similarity

- Y high similarity
 P partial similarity
 N no similarity
- 4 Sound Similarity
- Y high similarityP partial similarityN no similarity
- 5 Grammatical Function

Y - same function
P - partially similar function
N - different function

6 Correction

Y - item corrected
P - item partially corrected
N - item not corrected

7 Grammatical Acceptability

- Y acceptable
 P partially acceptable
 N not acceptable
- 8 Semantic Acceptability

Y - acceptable
P - partially acceptable
PP- potentially understood item
N - not acceptable

9 Meaning Change

Y - change occursP - some change occursN - no change occurs

Comprehension

No loss Partial loss Loss

Grammatical Relationships

Strength Partial strength Weakness Overcorrection

BIBLIOGRAPHY

BIBLIOGRAPHY

- Aurbach, Joseph; Cook, Phillip H.; Daplan, Robert B., and Tufte, Virginia J. <u>Transformational Grammar: A Guide for Teachers</u>. Rockville, Md.: Educational Research Associates, 1971.
- Bolinger, Dwight. Aspects of Language. New York: Harcourt, Brace, Jovanovich, Inc., 1968.
- Clarke, Mark A., and Silberstein, Sandra. <u>Toward a Realization of</u> <u>Psycholinguistic Principles in the ESL Reading Class</u>. Los Angeles: Minute Tape Company; TESOL cassette tape 20, 1975.
- Croft, Kenneth. <u>Readings on English as a Second Language for</u> <u>Teachers and Teacher-Trainees</u>. Cambridge, Mass.: Winthrop Publishers, Inc., 1972.
- Farr, Roger. <u>Reading: What Can Be Measured</u>? Newark, Del.: International Reading Association Research Fund, 1969.
- Fodor, J.A.; Bevor, T.G.; Garrett, M.F. <u>The Psychology of Language</u>. New York: Mcgraw-Hill, 1974.
- Gibson, E.J., and Levin, H. <u>Psychology of Reading</u>. Cambridge, Mass: MIT Press, 1975.
- Goodman, Kenneth. <u>Reading: Process and Program</u>. Champaign, Ill.: National Council of Teachers of English, 1970.
- ., <u>Theoretically Based Studies of Patterns of Miscues in Oral</u> <u>Reading Performance</u>. Washington, D.C.: OSOE Project 9-0375, Technical Report, 1973.
- Goodman, Yetta. "I Never Read Such a Long Story Before." <u>English</u> Journal, Vol. 63, No. 8 (1974).
 - , and Burke, Carolyn L. <u>Reading Miscue Inventory Manual:</u> <u>Procedure for Diagnosis and Evaluation</u>. New York: Macmillan Publishing Co., Inc., 1970.
- Greene, Judith. <u>Psycholinguistics: Chomsky and Psychology</u>. Harmondsworth, Mddx., England: Penguin Books Ltd., 1972.
- Harris, David P. <u>Testing English as a Second Language</u>. New York: McGraw-Hill Book Co., 1969.

- Johnson, Nancy Ainsworth. <u>Current Topics in Language: Introductory</u> <u>Readings</u>. Cambridge, Mass.: Winthrop Publishers Inc., 1976.
- Kolers, P.A. "Three Stages of Reading," in Levin, H., and Williams, J.P. <u>Basic Studies on Reading</u>. New York: Basic Books, 1970.
- Loram, Ian C., and Phelps, Leland R., eds. <u>Aus unserer Zeit: Dichter</u> <u>des Zwanzigsten Jahrhunderts</u>. New York: W.W. Norton and Company, Inc., 1965.
- Lugton, Robert C., and Heinle, Charles H., eds. <u>Toward a Cognitive</u> <u>Approach to Second Language Acquisition</u>. Philadelphia: The Center for Curriculum Development, Inc., 1971.
- Neisser, Ulrich. <u>Cognitive Psychology</u>. Englewood Cliffs, N.J.: Prentice Hall, 1967.
- Rigg, Patricia S. "A Psycholinguistic Analysis of the Oral Reading Miscues Generated by Speakers of a Rural Black Dialect Compared to the Miscues of Speakers of an Urban Black Dialect." Unpublished doctoral dissertation, Wayne State University, 1974.
- Ruddell, Robert B.; Ahern, Evelyn J.; Hartson, Eleanore K., and Taylor, Joellyn. <u>Resources in Reading-Language Instruction</u>. Englewood Cliffs, N.J.: Prentice Hall, 1974.
- Smith, Frank. <u>Comprehension and Learning: A Conceptual Framework for</u> <u>Teachers</u>. New York: Holt, Rinehart, and Winston, Inc., 1975.
 - ., <u>Psycholinguistics and Reading</u>. New York: Holt, Rinehart, and Winston, Inc., 1973.
- ., Understanding Reading: A Psycholinguistic Analysis of Reading and Learning to Read. New York: Holt, Rinehart, and Winston, Inc., 1971.
- Spache, George D. <u>Diagnosing and Correcting Reading Disabilities</u>. Boston: Allyn and Bacon, Inc., 1976.
- TESOL Quarterly, Vol. 9, No. 1 (March, 1975).
- TESOL Quarterly, Vol. 9, No. 3 (September, 1975).

