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ABSTRACT

This paper contends that children's failure to demonstrate predictable gains in reading ability may be attributable to the failure of the teaching program to focus on strategies involving larger and larger chunking of the language accesses. Teaching programs in reading should be constructed to develop middle-level reading skills. Such programs would call on a child's knowledge of syntax and pragmatics--a knowledge about how language is used. Incorporating pragmatics into a theory of reading aids the child's acquisition of the ability to spot implicatures, to understand what is left unsaid, to skip over redundancies, to spot the important, to skim over the unimportant, and to accomplish many other highly important cognitive processes. The development of functional language competence is essential to reading. Functional language includes reference to context, discourse, conversation, and language use over language form. When constructing reading materials it is necessary to attend to some common misconceptions about clarity and simplicity. Among these are that (1) a limited vocabulary or limited sentence patterns yield clarity, (2) short items are better than long items, (3) repetition contributes to clarity, (4) simplicity is equivalent to clarity, and (5) Latinate vocabulary is more complex than Anglo-Saxon words. (JK)

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Basic Inferencing in Discourse

Final Report on Grant No. NIE-G-78-0175

Roger W. Shuy

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CHAPTER ONE

Pragmatics:

Still Another Contribution of Linguistics to Reading

It has always amused linguists that the field of reading would allow to develop the perfectly asinine notion that there is such a thing as a " a linguistic approach to reading." One of the more obvious aspects of the act of reading (in most languages at least) is that, in some mysterious way, the knowledge of his language that a reader possesses is called upon and made use of. There can be little question about this activity among most readers who are speakers of alphabetic languages. This is not to say that such readers do not also call on other skills. Undoubtedly they make heavy use of the very stuff of psychology, but we have yet to hear of "The psychology approach to reading." It seems rather clear that social and cultural knowledge are also called upon by the reader but there has been no discernible rush to establish a "sociological approach to reading." The major principles of information processing are utilized in the reading process but no movement seems to be fomenting for "an information processing approach to reading." Why linguistics has been singularly blessed with such a burden is not at all clear but the phenomenon is certainly apparent when state textbook selection committees (as in Texas) set up "The linguistic approach" as a category of reading materials which must be represented on the state adoption list.

At first blush it would appear that linguists could be happy to be so highly valued by reading teachers but a closer examination of the situation will reveal that the attention paid by reading specialists to linguists has been superficial, fragmented and misguided. The reasons for this warped view of the field are not entirely the fault of the reading establishment. Linguists must share the blame, largely because they are generally unaware of what is going on under the name of linguistics in this field. But here, as on every other occasion in which the excuse is utilized, ignorance is certainly not excusable.

Linguists, for example, have known for some time that their field involves a great deal more than phonology. Yet all through the fifties and sixties the term linguistics was synoymous with letter-sound correspondences for most people in reading research, materials development and teaching. Such awareness was often accompanied by signs of relief that however esoteric this new linguistics might be, it at least bore some similarity to more comfortable phonics, giving birth to the enduring confusion between phonetics and phonics, a distinction made clearly by Charles Fries but missed completely by those who chose not to see it.

Another trivialization of the presumed linguistic approach to reading came about as a result of efforts to apply the then orthodoxy of language teaching to the reading process. Repetition drills were very popular at that time and it was naturally assumed that sentences like "Nan can fan Dan" would bring systematic, predictable regularity to the otherwise chaotic chore of learning to read. Now linguistics meant two things:

noise making and repeated noise making. Where linguists were hibernating through all of this is not very clear. Those were not languishing in their ivory towers of Old Irish pronouns were undoubtedly ignorant of the fact that language contains words, grammar, sentences, discourse, context and, above all, meaning or they could not observe the underlying sense of it all. At any rate, a new orthodoxy developed and Nat the fat rat came into prominence and the linguistic approach was redefined.

Largely through the efforts of Kenneth Goodman, Frank Smith and their colleagues and students, a counter movement to the obviously overdrawn focus on language units smaller than a word developed. The new evidence, impressively researched and eloquently presented, argues against decoding and for moving immediately to syntax processing. Linguistics is again redefined to include sentence and discourse level processing. The major objection to this healthy infusion of new blood into the reading process is that it tends to categorically reject other legitimate language processing units. To be sure, letter-sound correspondences are grossly overemphasized in most reading programs and it may well be that by paying continuous attention to only the phonological language access in reading, more students are lost from boredom than from ignorance or willful slothfulness. In any case, borrowing their premises from classical generative grammar, Goodman and Smith see reading as syntax or discourse processing of meaning units, not the one-to-one decoding of sound units. This healthy advance in understanding how language processing takes place in reading is generally referred to as psycholinguistics and reading.

Not in disagreement with the excellent notions of Goodman and Smith but in reaction to the still apparent incompleteness of this concept of linguistics, I convened a symposium on linguistics and reading at the 1973 New Orleans meeting of the International Reading Association. It was my contention that many aspects of linguistics, could be brought to bear on the act of reading besides those of phonology and grammar. Sociolinguistics, for example, is one such area. Another is a rapidly developing field of study shared by anthropologists and linguists generally referred to as the ethnography of communication. In addition, we need to know a great deal more about the interrelationship of child language acquisition to the ways he acquires reading skills and processing. The area of linguistics which seemed most attractive, however, grows out of a developing theory which exists almost in reaction against the excesses of generative grammar. Recently the term pragmatics has come to be used by linguists to refer to the task of recording and explaining a portion of linguistic reality. Pragmatics is generally concerned with the broader role of context as it is related to the beliefs and attitudes of the participants in a communication event. It deals with their status relationships and the purpose or intent of their communication.

This developing interest in pragmatics by linguists grows out of the controversy about whether or not syntax can be dealt with in isolation from meaning. Oddly enough, the fields of linguistics and reading had both tried, for a lengthy period, to separate meaning from the major thrust of their work. One might legitimately ask what the concept of reading might refer to if it does not involve meaning. One also might question what the field of grammar might denote if meaning continued to be separated from the analysis. But even the more traditional generative grammarians, those who believe that syntax should be studied autonomously, must work with a meaning-preserving hypothesis. That is, they must assume that stages in the derivation of a grammar related by transformational rules must not differ in meaning.[1] To preserve such a hypothesis, it is necesarry to speculate about the factors that contribute to meaning. It is obvious that some differences in meaning are smaller than others and some are more inconsistant and are considered to be pragmatic. Meaning differences which are large and consistent are considered semantic. Therefore, linguists interested in semantics should include references to pragmatics. More specifically, linguists who have begun to question the completenss or appropriateness of the body of linguistic facts which have traditionally been considered the subject matter of linguistics have come to consider the appropriateness of pragmatics as a necessary beginning point in linguistic analysis. There are three essential claims made by such linguists:

1. That native speakers know not only the form of sentences but also the appropriate use of them.
2. That native speakers understand the relationship between sentences which are formally, syntactically and semantically distinct.
3. That native speakers can carry on conversations with sentences that the syntax and sematics does not predict, but that seem regular and predictable.

---

[1] Margaret Griffin, "Pragmatics" Linguistic Reporter, November 1974.

To account for these factors of language use in natural context, linguists make use of the pragmatics of natural language.

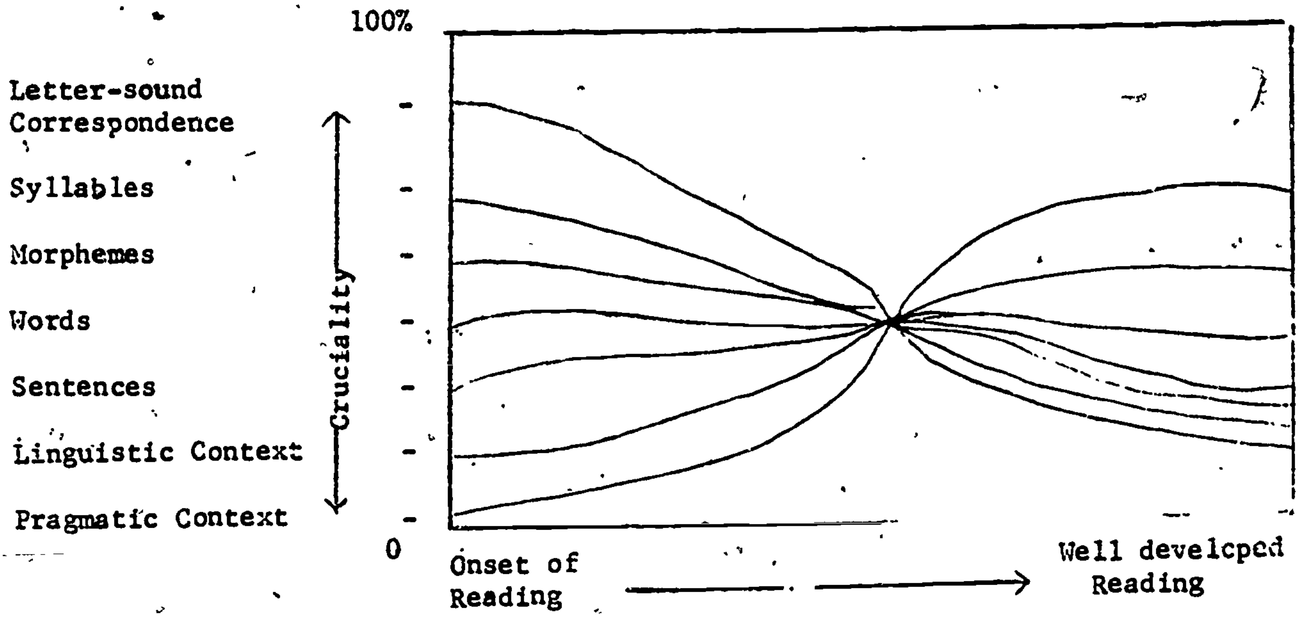
It seems obvious, then, that pragmatics deals with the aspects of meaning that are token oriented, not type oriented. That is, the element to investigate is the utterance, not the sentence. Furthermore, the utterance must be investigated in a well defined context. The major question underlying the study of pragmatics involves a decision about where the difference between semantics and syntax actually resides.

Whenever a new development in linguistics takes place it seems appropriate to consider how such developments relate to reading. It would seem that the major contributions of such developments would be at the middle-level of reading rather than at the level of the onset of reading development.

At this point, it may be appropriate to point out what appears to be a contrast between the position of Goodman and Smith from my own stance on the relationship of reading to language processing. Whereas Goodman and Smith appear to deny the usefulness of early level decoding, I stress its usefulness, but by no means to the extent attributed to it my most commercial reading materials. It is my position, in fact, that learning to read involves both the mundane behavioral skills stressed by traditional reading programs and the cognitive processes argued for by Goodman and Smith.

In my framework, learning to read, at least for some children, involves the learning of certain skills which, once learned, must be almost immediately shelved for more cognitive strategies. This statement will label one as a dirty cognitivist by the behaviorists who are attending to what I am saying and as a dirty behaviorist by the cognitivists who have not yet developed an attendance lapse. This quandry, however, does not really bother me much for I have no real concern as to whether I am considered a rat-runner or a cognitive leeper. As a linguist, not a psychologist, I have little to lose no matter what I am considered. With no flag to wave, I can easily assume a position which involves parts of both theories, a situation which I firmly believe to be operant in the case of learning to read. That is, my position on what happens in the learning-to-read process is that at the onset of reading, the more behavioral processes tend to dominate, but as the reader learns more and more about reading, he calls more and more on cognitive strategies, especially those which involve processing larger and larger language accesses. More precisely, at the onset of reading, the reader processes letter-sound correspondences, a skill which one learns primarily in order to begin to deny it in favor of other more cognitive strategies later on.

A schematic illustration of my theory of the language accesses involved in the reading process is the following:



It should be clear, however, that this schematic illustration is not a description based on research but rather it is a reasonable estimate of what is likely to be the case once the necessary research has been done. Of particular importance is that it displays letter-sound correspondence as crucial at the onset of learning to read, then decreasingly important as the learning to read process develops. Similar progression can be noted for each of the other language accesses, with particular focus, in the case of pragmatics, on the increasing significance of context and discourse. Note especially that both accesses are available and important at the onset of learning to read but of relatively low cruciality at that time. As the learner continues to progress however, he calls less and less on the word to sub-word level accesses and more and more on the language accesses that are larger than word level.

At this point it should be noted that most language learning activity parallels the learning to read progression insofar as the early stages of learning are relatively clear cut and show obvious gains whereas the middle level and advanced stage of language learning are less well-known and obvious.

That is, in almost every case, the stages in the beginning courses in language learning are relatively well known and measurable but, as the learner progresses, the exact stages in his program are less and less clear. From a commercial viewpoint, we know considerably more about how to construct introductory courses than we do about how to construct advanced ones.

The parallels to reading instruction should be clear. Historically we have developed reasonably good onset reading programs but increasingly ineffective advanced ones. Most children who are learning to read show predictable gains during the first year or so, then demonstrate, according to our admittedly weak measurement system, progressive fall off for the next few years. One contention of this paper is that a reason for this fall off is that the teaching program continues to focus on onset skill development at stages in which more appropriate strategies would involve larger and larger chunking of the language accesses. A second contention is that a teaching program in reading should be constructed to develop middle-level reading skills, a program which will call on a child's knowledge not only of syntax (as Goodman and others are doing) but also one which will make use of the child's pragmatic knowledge - his knowledge about how language is used. The remainder of this paper will be devoted to a set of suggestions for research and development along such lines.

In a recent paper on pragmatics, Griffin pointed out some obvious but little realized things which the act of reading can accomplish. It is depressing that the field of reading is so frequently conceived of as a methodology rather than a content. One important contribution of linguistics to reading has been to identify language and language processing in particular as one of the content areas of reading. More commonly, perhaps, reading is thought to provide an access to new knowledge through the way such knowledge is objectivized or unlocked by reading the words about it. Griffin suggests still another unlocking process, one which more clearly evidences the influence of pragmatics in reading. In an informal experiment, Griffin first had subjects read the following sentences:

> "Have you traveled much since you came to the Philippines,"
> Elsa asked Carol.
>
> "Well just in Cebu province. I want to Danao and Moalboal
> last month and last week I visited some friends in Talisay,"
> Carol answered.

Many accomplished readers of English do not know the names of three towns in the province of Cebu in the Philippines. Before the reading task, subjects were asked to name three towns in the Philippines. If the three in the reading passage or any other actual towns are named, the subject was rejected. Then the passage was offered to the remaining subjects. After reading it, the subjects could name all three noted in the passage despite the fact that the passage at no point identifies them as towns. The places names could be, for example, parts of one town for all the passage actually tells us. If the words of the passage do not tell the readers that the three cities are in Cebu province, how did the reader learn this? By calling on his knowledge of language pragmatics. The experiment demonstrates that reading can add to the reader's store of facts about the world that enter his knowledge base by means of language use rather than by objective semantic identity.

If the first sentence in the passage had read "Have you visited many towns..." instead of "Have you traveled much..." the reader would have been specifically clued with semantic matches for the three towns. But language is not always used so precisely and readers, like any other users of language, learn how to process pragmatically as well as semantically. One of the curious things about such a lack of semantic specificity is that human beings seem to be paradoxically programmed to need to be specific and, at the same time, to need to be subtly suggestive. It is well known that the use of connotation and synonymy allow for semantic sutlety. A second contribution to language sublety appears to be available through the understanding of how meaning is accomplished through sentence use, or through the combined use of more than one sentence.

Since readers can acquire knowledge about the real world through language use, it would appear obvious that knowledge of the facts about language use in the real world is useful if not necessary for good reading. The readers in the Griffin experiment learned something that was not otherwise made explicit solely by means of their knowledge of language use. Why not encapsulate such knowledge in the development of a reading program? Language users do not have to depend on outright statements. Nor do they require or expect lengthy ones. In reading, as in normal oral language, there is much that is left unsaid. Such information is often implied by what is said and is often filled in by the reader in terms of his background knowledge of the real world. A cursory examination of the Watergate transcripts will provide a wealth of examples of such implied information.

The theory of reading I wish to support is one in which the learner eventually acquires the ability to spot implicatures, to understand what is left unsaid, to skip over redundancies, to spot the important, to skim

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over the unimportant and many other highly important cognitive processes. What we have lacked in order to build on such a theory has been a theory of language which will enable such reading research to be relevant and focused. Classical generative grammar could not provide such a theory. It avoided the very study of meaning as much as possible and cared less for non-linguistic context conditions. The contention of this paper is that the developing field of pragmatics is beginning to offer such a theory.

All of the exact types of information which may be implied from a discourse have not yet been satisfactorily determined. Even though such information is as yet unsettled, H.P. Grice's delimitation of *conversational implicatures* includes principles and maxims which shape the discourse.

Grice's *cooperative principle* says only that the contribution of participants in a conversation should follow the accepted principle of language exchange. Various maxims support this principle. The *maxim of quantity* requires that each contribution should be as informative as is required but not irrelevantly informative. The *maxim of quality* says only that each contribution should not include what is believed to be false or lacking in evidence. The *maxim of relation* specifies that conversational participants should be relevant. The *maxim of manner* requires participants to avoid ambiguity, obscurity and disorder. Grice's contention is that the cooperative principle is necessary for language exchanges of any type to be successfully carried out. When these principles and maxims are violated, confusion and lack of comprehension obtains. Yet such information, as has been noted earlier, has little or nothing to do with the literal content of the grammatical structures. Instead it relates to knowledge of how language is used in the real world.

In recent times, linguists interested in the pragmatics of natural language have begun to explore what is involved in processing such sentences as, "It certainly is hot in here" which, under proper contextual circumstances may be understood to mean "Please open the window" or "Turn down the thermostat." Likewise, we all know if, when seated at a dinner table, someone says "Can you pass the butter" one does not respond by saying "yes I can."

Thus, this aspect of language, little studied in any formal sense, provides us with facts about how semantic processing takes place when the surface manifestation of language, as in the sentence "It certainly is hot in here," bears little phonological or lexical relationship to the underlying meaning. Since a great deal of reading instruction is based on the presumed one-to-one relationship of written words to dictionary meaning, it is likely that pragmatic aspects of language have been almost totally neglected either as a potential problem or as a likely asset.

Children who are learning to read already know a great deal about language. They may not be able to articulate exactly what it is that they know (this comes later, in endless semesters of something called English grammar) but there can be little doubt about the fact that they know it. What linguists who study pragmatics add to this known situation is that these same children also know a great deal about language usage. That is, they know a great many of the language routines such as the "Can you please pass the butter" type noted earlier. In essense, what we need to know about the interface between the pragmatics of natural language and learning to read are several things:

1. What is the extent to which such knowledge is applied in reading?

2. What are the conflicts or potential conflicts that grow out of a difference between the aspects of pragmatics used by the writer and the aspects of pragmatics called upon by the reader?

3. What are the differences, if they exist, between the facts about language usage which a person calls upon in speaking and listening as opposed to reading and writing.

To this point we have focussed on the ways in which reading can offer new facts about the world if the reader will only call on his knowledge of how language is used. The obverse is equally true. If the reader does not have the appropriate facts about the real world and language usage available to him, he may not be able to read the passage in which such information is critical. Carol Chomsky's research shows that the developmental acquisition of certain grammatical structures bears a direct relationship to the child's ability to process such structures in reading (1972). This evidence for the need for a match between grammatical structure and reading seems to justify our hypothesis that a similar match must exist between pragmatics and reading. As Griffin observes, "accomplished readers acquire facts about the world from reading and on the other hand need to have facts about the world to be accomplished readers." (1974).

Whenever there is an interchange between disciplines, when the facts of one field are exchanged with the facts of another, there is inevitable problem of terminology. Even an apparently clear word like context bears further scrutiny. Some reading manuals refer to context clues, but in general very little is done with them.

Context may be seen to be helpful to the reader on many levels at the same time. The information which is left unsaid in any given sentence is deeply dependent upon the context in which it must be implied. On a more obvious level, a sentence like "Father drove to the supermarket" leaves unsaid several obvious facts. For one thing, the setting is clearly mid-twentieth century, a fact signaled by the terms, supermaket. Having determined this, the word drove signals the existence of a car (more quantitatively predictable than truck or bus) rather than a horse, donkey or goat. There is little in the semantic structure of supermarket which signals modernity. There is even less in drove which signals car. Yet most readers will clearly fill in such information as they process the sentence in question. To put all such information in the surface form of the sentence would yield something like "In the mid' twentieth century at an unspecified particular time, Father drove a car (probably his own) to the supermarket (probably for the purpose of purchasing groceries for his family). Layers of other implications can be imagined. One must fill in that father had money as a result of being gainfully employed (although other less predictable alternatives also are possible) and that he intended to provide sustenance to his children (the word father implies children, including, quite likely, the person who uttered the sentence).

Context can be increasingly helpful to the reader as the passage becomes increasingly predictable. Since clichés are the most predictable, they provide the most predictable contexts for reading:

Sharp as a ____________________.

____________________ as a cucumber.

Familiarity of object, concept or event is almost as predictable as cliches:

I eat lots of bread and j________________________.

The batter hit the_______________________________.

Since it seems clear that readers predict what they do not know on the basis of what they do know, it would see appropriate to make use of predictable contexts, even cliches, in early reading situations. More important, it would seem appropriate to avoid unpredictable contexts, such as figures of speech, metaphors or unknown concepts at such a stage in reading acquisition. Few reading programs ask the reader to call on context clues in any positive, constructive way. Most programs could benefit even from knowing how to avoid counter productive contexts.

One problem in developing context processing skills in readers is in getting the children to know where to look for critical information or clues. It is my opinion that an early stage would be to provide sentences with a blank with several potential fillers. The child must select one filler, then mark the word or words in the sentence which motivated their selection. For example:

The sailors were reading their____________for winter storage.

and
planes
cars
boats
wet

In this case the reader would pick boats and circle sailors as the motivation. Naturally, it would be possible to believe that sailors might ready their cars or planes for winter storage, but this choice is less predictable than boats. The other two choices, and and wet, are excluded on grammatical grounds.

Similar language processing exercises might include the use of sentences with strategically placed blanks but with no particular focus on specific motivating clues. For example:

Jane's room is ____________ because the ____________ is open.

Giant ____________ broke over the deck of the ________________.

The skill involved in learning to process reading by context clues runs counter to a widely held but obviously erroneous assumption of reading - that the reader should read carefully. On the contrary, the skill to be developed is one of learning to ignore as much of the printed page as possible while still getting the general meaning. Ironically enough, most tests of reading comprehension run the risk of penalizing the efficient reader who has learned to make use of context clues to spot the important parts of the passage and to skim over the unimportant. For example, the following type of question requires the reader to pay careful attention to relatively unimportant details:

Read the sentence below. Put an X by any other following sentence that means the same thing as the first sentence.

A red fox family on a single hunt may catch eight pounds or more of mice and rabbits.

__________ On a single hunt, a red fox family may catch eight pounds or more of rabbits and mice.

__________ Eight pounds or more of mice and rabbits may catch a red fox family on a single hunt.

__________ Eight or more red foxes on a hunt may catch a single family of mice or rabbits.

__________ As many as eight pounds or more of mice and rabbits may be caught by a red fox family on a single hunt.

Such an exercise as the one above seems to contribute little to the efficient acquisition of meaning through reading. If anything, the task will develop cautious and suspicious readers. Rather, the task of processing involves confidence and a willingness to hypothesize from limited information. The real trick is in learning to seek out the right clues and to avoid the wrong ones. I have often wondered why we have not made better use of the knowledge and intuition of good readers in an effort to discover how they actually process such passages as the following:

> Can you remember when a friend wanted something you had? And you wished you had something that belonged to your friend? And then the two of you traded? Long ago, before there was any money everyone traded the things they didn't need for the things they wanted. Suppose you had two cows but no hay to feed them. You might find someone who would trade you some hay for one of your cows. Then both of you would have what you needed.
>
> But sometimes trading didn't work so well. Sometimes traders couldn't agree just how much hay one cow was worth. Even when they did agree, there were problems. They might decide the hay was worth only half a cow. But since half a cow is really no cow at all, the man would still have to give a whole cow for the hay. Trading was sometimes disappointing. And it was often hard work.

Recent experiments in walking a child through a reading test, administered it individually and orally have been very revealing. We have learned, for example, when asking a child why he answered what he did, that he sometimes answers wrong even though he knows the right answer, or that he answers right but for the wrong reasons. One can only wonder what a test score can mean when the variation of right and wrong answers is so whimsical. By the same token, it is revealing to have children read passages like the preceding, then immediately say the three words which stand out most in their memories. Good readers will recall trading, problem, cow or perhaps other important words in the passage. By tracing the clues offered by good readers, we can learn something about the process involved in such search strategies. Eventually we can learn that a word which is often repeated is not always an efficient clue. In this sense, the word problem is probably a more efficient clue than cow or hay.

From such exercises we can learn the use of context, in the field of reading, refers to the act of determining the meaning of an unknown word by first noting the rest of the sentence, then guessing at the meaning of the unknown word which appears in it. The other words in the sentence and perhaps even the syntax help the child unlock its meaning. The sentence "There were seven yellow fleegles growing in the backgard", contains an unknown word, fleegles. An informal check on the reactions of twenty subjects showed that fleegles are thought to be flowers or bushes. The fact that seven of them can grow in a backyard implies something about size. That they are yellow tends to rule out the more commonly known trees.

In the case of the pragmatics of natural language, the term context takes on additional meanings. The basic meanings of the word, in such instances, are assumed to be known. "Can you pass the butter" contains no words which come close to the "fleegles" category in this regard. Linguists consider context to be more than just the surrounding syntax and phonology. It includes the social context, a reflection of the expectations of both the writer and the reader, the attitudes, beliefs and values inherent in both the purpose of the sender and the subjective reactions of the receiver.

The sense of situational appropriateness in such a wide range of contextual possibilities can be very complex. Recently, for example, I observed a pragmatic confusion in a Physician's office. The patient, obviously contemplative about the purpose of her physical examination, completely misunderstood the doctor's opening greeting:

Doctor: Hello, Mrs. J__________, how are you today?

Mrs. J: Well, I've been having a lot of pain in my side.

No words were uttered by either the patient or the doctor as the realization of both of their errors took place. Only awkward silance and body twisting ensued. In most social contexts, "How are you" has little or nothing to do with ones health. In a doctor's office, however, the territory becomes confused, at least for some patients.

Likewise, the status expectation of a reader or listerner is critical to effective communication. Regardless of how much empathy a physician may develop for a working class patient, some evidence exists that it is inappropriate for the doctor to try to talk with his patient in the patient's own social dialect. Instances in which such behavior has been recorded seem to indicate that a patient's expectation is for the doctor to speak "doctor talk," not "patient talk". He is expected to be clear and he must develop receptive competence for his patient's language, but he runs the risk of inappropriate violation of expectation if he tries to speak it.

In the research on vernacular Black English done primarily in the sixties, it was established that there is a continuum which ranges from the sort of speech used in everyday life to the type which is found in more formal writing. Speakers of non-standard vernacular versions of English tend to be farther away from written language than are speakers of a more standard dialect. Thus, when it comes time for speakers of a non-standard English to learn to read, the relationship of writing to speech sets up a greater predictability gap then it does for standard English speakers. As a result of this realization, several hypotheses were suggested (Wolfram, 1973) but few were ever thoroughly assessed. It was suggested for example, that a sentence such as "Jane asked if she could have some cake" might be grammatically unpredicatable for a child whose home language specified the equivalent "Jane ask could she have some cake." The exact consequences of such unpredictability was never really charted, for the issue became clouded with non-linguistic considerations, mainly by the negative reactions of the general public to any written manifestation of non-standard language in an educational context. The principle of the mismatch, or potential mismatch of the spoken versus the written language continues to be operative, however, even in cases in which non-standard versus standard English is not an issue. At the onset of reading instruction, when children are focusing most of their efforts on processing at the word level or smaller, such a mismatch may be less obtrusive. But once the child goes beyond the more mechanical aspects of reading and into more cognitive predicting at the sentence and discourse level, the similarities between the language used in real life and the language which one has to read may become increasingly unclear. The stuff about language which he knows and uses in his own speaking may be known and used by a writer in a quite different manner. Such a mismatch can prevent proper clue processing and hamper effective readings, especially for the reader who has mastered the smaller language unit processing skills adequately enough to have begun to call on them less and less while he moves to syntactic and discourse oriented processing.

Many of the potential mismatches which can occur in the processing of sentences by middle-level readers stem from the generally unrecognized differences which exist between speaking and writing repertoires. There are certain things that one writes but never speaks and others which one speaks but never writes. For example, we typically write "He will go" but say "He's going to go." But such differences between speech and writing are not limited to grammatical distinctions. Frequently we include irrelevant information in written language, especially unmemorable subordinate clauses which are inserted either to compact more information into the sentence or to represent an air of jaunty youthfulness:

> John, who wears bow ties and short pants, never plays football or tennis.

Such a sentence clearly violates Grice's cooperative principle. What is suggested is that a careful study be made of the ways in which early and middle level reading materials handle the various maxims which support the cooperative principle. Does irrelevance interfere with meaning? Is the passage ambiguous, obscure or disorderly?

Students who are learning to read already know quite a bit about language usage. We have known for quite some time that they know a great deal about grammar and phonology. To date we have been primarily concerned about the latter and we have tended to ignore the former, the pragmatics of language as it relates to reading. Just exactly how does a reader apply his knowledge of language pragmatics to the reading process? What are the conflicts between the language pragmatics of the writer and those of the reader? How different are the facts of usage in writing from those of speaking? Are such gaps inherent? Are they exacerbated by particular materials? Does the focus on certain methods of teaching reading at certain times in the curriculum lead to more extensive gaps? Exactly which principles or maxims of language usage are typically violated in reading materials? What types of conflicts between the language pragmatics of reader and writer are tolerated? Which ones are critical?

These and many other questions have been revealed by the recent development of pragmatics in linguistics. The implication for reading is obvious. What remains to be done is the work.

CHAPTER TWO

Research in Functional Language
As It Relates to the Teaching of Reading

Introduction

A few years ago a book was written and dedicated by its author, Albert Cullum,"to all of those grownups who, as children, died in the arms of compulsory education." The book, The Geranium on the Window Sill Just Died but Teacher You Went Right On (Quist, 1975) contains some marvellous vignettes about classroom language. Of particular interest to linguists is the page which contained these words:

> Good boys and good girls always listen.
> To learn, we must listen.
> We must listen all the time.
> Good boys and girls never talk,
> but they always listen.
> WE should listen and listen and listen!
> To you, teacher,
> and your words, your words, your words.
> Your words, your words, your words,
> Your words!

The child of this quotation had learned a very important thing about child language: that it was asymetrical. You don't get a turn if you're a child. Turn taking in any other form of life has quite different rules. Furthermore, teachers can interrupt children but children cannot interrupt teachers. Language, so comfortable and predictable at home, on the playground and on the street is, in the school room, not what it seems. Children are the learners but the teachers are the ones who ask the questions. Does this make sense? Only in education and only at the expense of learning a new set of language rules for the express purpose of learning the content which expresses these rules. Linguists have become very interested in these functional uses of language in recent years and this paper will delimit some of the areas in which this functional language of children relates to the teaching of reading.

This history of the relationship between linguists and reading researchers has been spotty at best. On the whole, linguists who are trained primarily in linguistics have shown little interest in reading and reading specialists have often failed to understand one of the most important things about reading: that it is a language processing operation.

Research in the field of reading is actually rather recent. The first doctoral dissertations in reading were in the twenties. From 1925 to 1935 there were about thirty-five dissertations and 654 research studies, mostly looking at the product, not the process. It was a time of interest in disabilities, reversals and readiness. From 1935 to 1950 was actually a setback in reading research. Many interview studies, questionnaire-based statistical studies were common. From 1950 to 1965 there were about fifty dissertations a year. More attention was paid to research design, disabilities, personality, concept formation and reinforcement. Practically no studies connected reading to language. Testing is rampant, based on largely unreliable and invalid instruments. Since 1965 there has been a gradual buildup of studies in interdisciplinary aspects of reading. In the research departments at some universities the language base has now become integral in reading research.

The Development of Interest in Linguistics and Reading

Out of this tradition, it is not surprising that linguists have shown little interest in what was called reading (at least until very recently). On the other hand, linguists were equally myopic about their own field. In the forties, the major work in linguistics seems to have been in phonology. This is natural since the sounds of language have high recurrence and a relatively controllable inventory. The mouth is a great deal smaller than, for example, the totality of semantics. The study of meaning,in the forties and fifties, was largely limited to the word or morpheme level. This set the stage for the new transformationalism of the sixties which focussed on syntax rather than phonology or words but which still kept meaning at safe arm's length.

Peoples' knowledge of linguistics is said to be the product of the time in which they learned it. The individual soon finds that it is necessary to move out from what was taught and continue to learn. New disciplines, such as linguistics, are particularly hard on their practitioners in this regard for there is always a new theoretical revolution lurking around the corner as soon as it appears that the canon is settled. Just as it became clear that generative syntax was the key to linguistics, another revolution hit. Sociolinguists began to chirp about context, linguistic and social and the fact that language does not exist apart from it and that it, the context, has to be considered as part of our descriptive and analytical work. At about the same time, generativists began to experience an internal revolution as well. They began to wonder whether syntax could exist apart from the meaning which it intended to convey.

Parallels in Linguistics and Reading -- Separation of Meaning from Form

This question is particularly important for reading research for it has a rather clear parallel in that field. If linguists could ask, "Can syntax be independent of meaning?" then reading specialists should ask, "Can decoding exist apart from comprehension?" They are amazingly similar questions. Linguists of the seventies began to find it difficult to imagine that people could go around uttering syntax without regard to meaning and, more importantly, that their analysis of syntax could be very meaningful without the meaning which it conveyed.

It is unfortunate that reading became enamored of linguistics at the phonology-focussed stage of its existence rather than at the meaning-focussed stage. To many people in reading, linguistics seems to stand for letter-sound relationships rather than the multi-tiered accesses of phonology, morphology, lexicon, syntax and discourse. All of these tiers involve meaning except phonology. An understanding of this simple observation would save thousands of hours of futility in reading-testing of the sort which tests comprehension at the word level while ignoring meaning at the sentence and inter-sentence levels. The Flesch Readability formula, like so many others,fails because it assumes the autonomy of the sentence whereas comprehension breakdown as often occurs across sentences as with them.

Surface Level Focus

All of this discussion of how linguistics has been moving from smaller units, such as phonology, morphology and lexicon, to larger units such as syntax and discourse also has a parallel in reading. What has been easiest to see has been letter-sound correspondence. It happens frequently and has a low-inventory. These characteristics give it the highest ranking in education: visibility and a potential for quantification. If we can count it, it must be scientific. The physical sciences may have led us into this but it is likely that we would have created the concept ourselves anyway for education appears to follow the iceberg metaphor: it sees and, therefore, measures that little which is above the water line and ignores the larger mass which is underneath the water. The latter, of course, is the most dangerous for it has the capability of sinking the ship. Just as linguistics in past decades dabbled with the language which was most visible and countable, so reading took as its object decoding, that small piece of reading which is above the water line. This is not to say that either phonology or decoding are useless or trivial. Rather it implies that in taking them into account we have analyzed neither language nor reading. Indeed, in dealing with these we have scarcely begun our work.

Deep to Surface Learning

Linguists who were concerned with language teaching provide a third rather amazing parallel to what has gone on in reading instruction. Most language texts, including English as a Second Language (ESL) materials, have stressed drills to produce native-like grammar and pronunciation. Recently, scholars who have been studying the ways in which children learn their native language have begun to realize that this amazingly efficient process seems to work in a way which is almost diametrically opposite to the common teaching methods. Using a metaphor of linguistics, children seem to learn their mother tongue by moving from deep to surface structure. That is, they have a major concern with what they want or need, not with the details or form of how they say it. Many foreign language classes appear, quite the contrary, to stress how to say it rather than what is being said. In other words, the form is stressed over the function despite the fact that the function is the sole reason for speaking at all. If children learning their native language were to wait until they were drilled in the proper pronunciation and grammar, they might never survive childhood at all.

Function is more Important than form

A second development growing out of the understanding that learning comes from deep to surface rather than vice-versa was that language function appears to be more important than language form. That is, how to get things done with language seems to be more critical for communicative competence than correctness of tense or accuracy of pronunciation.

Functional Language Competence

Functional language competence can be described as the underlying knowledge that people have which allows them to use their language to make utterances in order to accomplish goals and to understand the utterances of others in terms of their goals. It includes a knowledge of what kinds of goals language can accomplish (the functions of language) and what are permissible utterances to accomplish each function (language strategies).

Functional language competence also accounts for knowing what utterances cannot do. In English, simply uttering the statement, "You are a worm", does not usually turn the listener into a worm. In the U.S. at least, the words "I divorce you" do not constitute the completion of divorce proceedings but "I christen you John" does work to christen a child. Likewise if a teacher tells a student, "You have one minute to get over here", the utterance can act as an order but if the student says the same thing to the teacher, such a meaning is, at best, far-fetched.

This brief discussion of some aspects of functional language competence shows that a speaker's underlying knowledge must be very complex and extensive. In the literature of linguistics, sociolinguistics and philosophy, at least three other terms are also used to refer to functional language competence: communicative competence, pragmatics of natural language and speech act competence. All who have studied this phenomenon agree that language users cannot possibly learn and store in memory all of the complexities of functional strategies and utterances as item lists any more than they can store phonological or grammatical language as item lists. This knowledge must be learned and stored according to organizational principles. These principles may be considered constitutive rules which account for the successes and failures in the utterances meant as promises, for example, but they also separate promises from orders, requests for information, etc. In a similar manner, the constitutive rules of football not only account for the successes or failures of particular plays but also account for football being football and not baseball or soccer.

Functional language competence is relevant to reading in several ways. The rest of this paper will describe some implications of the knowledge of functional language to the diagnosis of reading ability, both that which interferes with it and that which develops it. In addition, we will focus on some of the special problems of culturally and linguistically different children as these relate to functional language ability. Although functional language is somewhat equivalent to "speech act theory" and "communicative competence", we have chosen to use it as a label simply because it seems to us to carry along with it less of the baggage of its spawning disciplines.

Context

In order to study how language functions, it is necessary to examine it in large contexts. The sentence is not large enough for this, of course, since meaning has a way of escaping across syntactic boundaries. The term, discourse, has become accepted to represent that concept. Discourse analysis means many things to many people but there are a few generally agreed upon characteristics. One is the concern with the actual situation of natural language use. Social scientists have made great advances by simply examining the actual details of the speech production found in conversations. Such text is not edited but, rather, contains hesitations, false starts, overlap, coughing, laughing and other natural aspects. These features of speech are not regarded as abberations but are seen to work with the conversation to produce the underlying meaning of the utterance. Recent observation of hundreds of hours of video-taped classroom behavior reveal, for example, clear intonation differences in teacher talk during different parts of the lesson. During the explanatory parts of the lesson, the teacher's voice has a wider range and a slower pace. The rest of the lesson is slightly narrower in range and faster in pace and during the transitions, introductions and other non-lesson segments, the range and pace are conversational. The point here is that if researchers were to work with transcribed text of the classroom talk, they would observe none of these clear markers of lesson significance.* A number of researchable questions derive from such observation, including the following:

-- When and how do children learn how to recognize and use these lesson-significance signals?

--What does lesson-significance intonation signal in the reading lesson?

--Why is it that male readers use intonation range and pacing so differently from females?

--Do male teachers use intonation significance marking in the same way as females?

--At what age or grade level does this intonation significance marking diminish or decrease? Our limited data seem to suggest a break between third and fourth grade teachers in this.

Organization

The study of language functions accounts for the organization of conversational interaction and sequential orderliness. A number of issues involves in turn taking, getting a turn, when to begin or when to end, how to contribute a relevant comment to

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*Cullum also had some lines to illustrate this:
"You talk funny when you talk to the principal
Or when the teacher next door borrows one paper.
And when my mother comes to see you,
you talk funny.
Why don't you talk to them like you talk to us?"

the topic, how to change the topic, etc. have been overlooked as linguistic data until rather recently. Linguists need go no further than current educational legislation in order to see the relevance of such language functions. The Aspira Consent Decree in New York City, for example, specified that the school system develop, administer and score a test to determine which language, English or Spanish, the Puerto Rican children used "to most effectively participate in the classroom" in reading, writing, listening and speaking. The schools soon discovered that they did not really know what it means to effectively participate in the classroom. Current testing capabilities were for measuring vocabulary, pronunciation and grammar. This is natural since these characteristics are all above the educational water level. That is, they are highly recurrent and visible. But just ask, for a minute, which of the two Puerto Rican children is in the best shape for education: one sixteen year old can contrast shoes and choose, presumed difficult contrasts for Spanish speakers, but cannot seek clarification when he does not understand what is going on in the classroom; the other sixteen year old has trouble with the shoes-choose contrast, but can seek clarification when he doesn't understand what is going on. Which one will be best able to effectively participate? Naturally, the one who knows how to seek clarification, for he has learned an extremely important language function.

The Relationship of functional Language to Reading

From this example it appears that language functions, getting things done with language, have more ultimate classroom value than language forms. In a way, this principle is supported by research in child language learning as well. Now we can ask what such information has to say to reading research. Three aspects of such application are apparent: the process of classroom interaction, the interaction of child with text, and events during which reading takes place.

The Reading Process

Linguistic aspects of the reading process and written-text material are viewed by linguists as, in effect, one dimension. In general an understanding of the organization of the language data is seen as the way to get at studying the operations of the language user. Thus, studies of the written text are the studies of the linguistic processes in reading.

The reading process is little understood in terms of functions. Some research is being carried out on what children bring with them to the reading act which enables them to be either efficient or inefficient. For example, we know that the following paragrph will be understood despite the lack of surface information it contains.

> Last week I travelled in California. I visited Sacramento, San Diego and Los Angeles.

There is nothing in the text which indicates that the last three place names are cities in California but, whether the exact geographical facts are known or not, native speakers of English will assume that they are all sub-members of the larger category, California. Something in the nature of how our language works and how the world works enables us to know this. The principle is apparently similar to the anaphora rules which enable us to determine the antecedents of our pronouns. Richard Anderson has shown a similar ability of readers to remember lists of food items when they are presented in one context rather than another. In a story involving a restaurant these items are better recalled than in the context of a grocery store. Different principles are at work in these two cases but the result is similar. The learner brings information to the reading event. The schools need to learn how to use this information. To date we have let it work against us. One of the great principles of the science of physics is that its leading researchers have learned to work with the laws of the universe rather than against them. They have not tried in short, to repeal the law of gravity. By analogy, reading instruction has tried to repeal the laws of context and language. We have wrenched learning from its context and, in the process, we have penalized many learners. For one thing, we have penalized smart children who bring to the test question more creative possibilities than the test writer imagined. In private research, for example, one of the chimpanzees that had been taught a symbol system was given parts of an intelligence test which was translated into that system. One question asked the readers what they would do in case of physical danger: call a policeman, look for mother, run away or climb a tree. The chimp, obviously, picked the last (wrong) answer because it brought to the test more and different information than the test writer expected. This is why adults often have such a difficult time with a standardized test written for children.

Ironically the many language accesses to reading which children have available to them are more than any reader could possibly need. By accesses, I mean the language units available to the reader in the process of reading. They include the basic tools of linguistics: letter-sound correspondence (phonology), morophlogy (affixation), syllables, words, sentences and discourses. To use only one of these accesses (such as phonology) while ignoring the others is inefficient, yet this is what many reading programs do. The irony is that the smaller accesses are learned in order to be overlooked as quickly as possible. Letter-sound relationships are good only as beginning level strategies or for tackling a new foreign word. It is terribly inefficient to use only letter-sound correspondence in reading. It is learned only to be shelved and stored for future use. The same can be said for the processing of morphemes, syllables and words. At the sentence level, language functions begin to be critical. Just as children learn to clarify, deny, invite, explain, request, insult, etc., in their oral language, so they must learn to utilize this knowledge to process the written text and even to understand the teacher. When a teacher says to a class, "I see someone whose hands aren't folded", the child had better learn that this is not a casual descriptive observation. It is, on the contrary, a clear command. Semantic analysis at the word level would never reveal this--only the various contextual clues make it clear.

What seems to be clearly necessary is research which will lead to knowledge of the best practice which will help children call on context more heavily than they now do to get the deep structure, functional meaning. For example, exercises can be developed to train readers to see the necessary discourse markers as framing units. The underlined words in the following sentences make this clear.

> The first thing he needed to do was to buy a bike.
> Then he could enter the parade and maybe, just maybe,
> he would someday win the prize.

We have known for some time that written text is framed with discourse markers of various sorts, depending on the style. Narratives contain time markers (first, next, secondly, etc.) Descriptive writing contains units such as "on one side of the room" and "on the other side" which serve as discourse markers which light the reader's path. Expository prose contains many marked and predictable introductory phrases, continuation markers and summary expressions.

Discourse processing skills are seldom if ever developed directly as part of a reading program. How, then, do children learn them?

As part of one of our reserrch projects, we have discovered that inferencing skills are often interfered with rather than assisted in many reading programs. Freeman cites an example from a widely used reading program, as follows:

> Lucy was a busy worker. She painted many pretty pictures. But Lucy had one problem. She didn't listen.

There is no syntactic connection between the last sentence and the penultimate one. Yet a great deal hinges on the reader's ability to understand that the entire last sentence explains or substitutes for the word problem.

The same reading series also plays a bit loose with pronoun reference clarity. The story explains that one day Lucy was painting and the teacher told the class to go to the library. Lucy didn't listen and suddenly found herself in an empty room. She thought the class all went to lurch so she went to her locker to get her lunch and met her friend, Mary. At this point, the texts reads:

> Mary saw Lucy with her lunch bag.

A great deal of context is left out here. One can only infer that the lunch, whoever it belonged to, is in a bag and that Lucy had fetched her own and not Mary's lunch. (Perhaps the story would have been more interesting if the lunch were really Mary's and Mary caught Lucy redhanded). We still do not know exactly what goes on in the reader's mind as he learns to process utterances in writing. Undoubtedly, different readers do different things with different types of text. The quetion here is simply that something is going on, that utterance processing is probably involved, and that materials development projects could easily benefit from linguistic research in this area.

The Interaction of Child and Text

A second application of functional language research to reading has to do with the interaction of the text with the child. Put another way, such comparison matches the assumptions and values of the writer of the text with those of the reader.

The interaction of the child with the text is a phenomenon which has been studied rather blindly, if at all. One of the characteristics of discourse study is that the analysis is done on naturally occurring interactions in a wide variety of situations. This means that the more common research strategies, including most experimental work, elicitation techniques and rating procedures (including testing) are not relevant. There are, at present, no known totally satisfactory ways of eliciting language functions experimentally.

Several misconceptions about what constitutes good writing for children have been discussed in this recent literature.* One common error is in thinking that children require limited vocabulary and high degree of repetition of a limited number of letters, words or syntactic constructions. This approach is misguided on several counts. For one thing, there have never been acceptable studies of exactly what the given vocabulary or syntactic constructions should be for the developmental stages of learning. Reading texts are frequently devoted to limiting the number of words used to refer to a given concept. One gets the impression that if the text were to use two or more terms for the same concept, the child would be more likely to misunderstand. This results in passages like the following:

> Jill said, "Help Ben, Bill.
> Stop the ducks.
> Help Ben stop the ducks."

It appears that the effort to control the number of words used brings a kind of clarity at the word level but confusion and unnaturalness at the syntax and discourse levels. Nobody talks like this. Nobody even writes like this. Decoding may be aided but comprehension will be interfered with when the principle of limited inventory takes precedence over clarity of discourse.

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* See Chapter Three.

The major negative effects of limiting the linguistics inventory are three:

> (1) The resulting prose is very unnatural. Most speakers and writers do not use the same word over and over. From their earliest training and observation, people are taught to vary their use of words, to use synonyms and to avoid monotony in general.
>
> (2) The resulting prose reduces redundancy. Much of communication is based on a kind of conceptual triangulation. We write or speak an idea one way, then restate it another way in order to provide two views of the topic to our listener or reader. This redundancy is conventional in formal writing (the introduction tells the reader what you are going to say; the body tells it; the conclusion tells what you have just said). Is is common in most exposition (the point is articulated and then illustrated--a kind of realistic retelling). When writers use the same words or phrases over and over, they reduce the natural redundancy expected in communication. Thus, by limiting the number of words used to refer to a concept, one reduces the communicative redundancy which the use of different words for that concept can provide.
>
> (3) The decision to repeat a single term rather than a variety of terms may mean that the term will be used in a wider variety of contexts than would normally be the case. In children's texts, for example, a decision is often made to use only a word such as *know* and to forego *realize* or *understand*. The motivation to do so is honest and enlightened. The problem is that our language is not always subject to such logic. *Know* simply cannot easily substitute for every instance where *realize* or *understand* can be used. Likewise *peace* and *tranquility* are thought to be synonymous until we try to substitute tranquility for peace in expressions like *peace conference*.

The motivation for limiting the linguistics inventory in beginning reading materials may be perfectly reasonable. But such efforts can, and apparently do, run afoul of other language forces at work on the same passage.

Another common misconception is that *short items are better than long ones*. This principle is often accurate but by no means is it universal. The word *sphinx*, for example, is shorter than *merry-go-round* but by no means is it easier. A complex sentence, if well constructed, can be as clear or clearer than a short one. This principle of brevity-preference was popularized by Rudolph Flesch in his various books on composition and reading. Out of it has grown the idea of readability formulae, most of which are based on the faulty assumption that short is clearer than long.

One way to convert long sentences into short ones is to reduce clauses into phrases. This sometimes leads to an increase in prepositional phrases and a decrease in verbs. The net result is a piling-up effect. For the reader, this means clarity at the phrase level but potential difficulty at the sentence and discourse levels. Once again, larger contexts tend to be overlooked in the effort to provide clear writing The view is short sighted and rather myopic.

A third widely held misconception about appropriate texts for children is *that repetition contributes to clarity*. Again, the language of the classroom provides an interesting example. Early reading materials for children are filled with pedagogically motivated repetition such as, "Run, run, run! Run, Spot, run!"

In theory, the child learns from repeated reinforcement. Such repetition, however, is potentially dangerous to clarity of comprehension. It runs counter to another discourse principle, namely, that reader~~s move from what they~~ know to what they do not know, predicting the unknown from the known. Any repetition which yields unpredictable texts blocks the reader's calling on what he knows about how language works or how the real world works, his two most important tools for understanding.

Consider this typical example of basal reader prose where the word turtle is repeated in every sentence.

> Jill said, "Turtles like to hide.
> Nan said, "Turtles like to hide.
> Turtles like to eat.
> But what will this turtle eat?"
> Bill said, "Turtles like to swim.
> But this turtle can't swim here."

One notices immediately the inordinate repetition of the word turtle in this passage. This repetition runs counter to natural principles of discourse organization. Whenever serial repetition takes place in written prose it is done either for artistic effect (as in Mark Antony's "for Caesar was an honorable man" in his famous funeral oration) or it is in violation of the of the natural discourse rules of English. Pronominal forms enable us to avoid repeating the subject over and over. Rather than becoming clear, the repeated words provide interference to the readability. Something from the art of writing tells the writer to avoid using the same word at frequent intervals. It would appear in this instance that by limiting the inventory of terms, one also increases the frequency of occurrence of these terms. Inventory reduction and frequency of occurrence can be (and often are) opposing forces in the search for clarity.

These misconceptions about simplicity and clarity in reading materials must be addressed if one is to evaluate texts in any meaningful way. Most readability formulae are guilty of some or all of these misconceptions. Current measures of clarity and simplicity are inadequate along the lines noted above.

The Events During Which Reading Takes Place

The investigations of events during which reading, reading learning, and reading teaching take place have been very recent. This has been the least studied aspect of reading by linguists and by others. Ray McDermott has done detailed micro-ethnographic work on one such event, the oral reading group in elementary school. Robert Calfee has done a less fine-grained analysis of reading lessons in elementary school.

Jane Torry has studied an untaught reader. Peg Griffin points out that that investigations of reading times as defined by a curriculum are insufficient for observing the learning and teaching of reading in classrooms and that unofficial reading events focus on aspects of reading generally considered appropriate only for more advanced readers. It is clear that detailed observational work in a variety of settings with a variety of age groups needs to be encouraged if we are to have a descriptive base for understanding both universal aspects of reading and reading learning, and those aspects subject to cultural or individual variation. The language, kinesic and other social systems involved in learning to read and in reading are available for us to observe and the analytical tools necessary to use evidence from such observations in theory building are becoming quite sophisticated. Yet, we have failed to develop this important body of information.

It is quite clear, however, that reading takes place on many occasions that are not labelled reading class and that much of what is taught in the area of comprehension is not taught in the reading lessons. Our Washington, D.C. research has shown us, for example, that inferencing is more likely to be taught in story time, when the teacher reads to the class, than it is during designated reading. It also occurs when the lunch menu is read and during various hands-on experiences such as cooking and science experiments.

This important aspect of reading, the events during which it takes place, needs to be considered seriously as we move more and more toward studying language and reading in its functional contexts.

Conclusion

We are currently entering into a new period of research interest in linguistics. We have moved from small to large units of measurement and, in doing so, we have become more relevant to our neighboring disciplines. With a focus on discourse, and on functional language in particular, we are getting to the heart of something which all small babies have been doing naturally for centuries. Perhaps this is a criticism of our own field--perhaps it is a compliment. For the field of reading, however, it is a glorious new tool--one which offers reading far more from linguistics than ever was thought possible in the past. Functional language poses many research problems to be sure, couched as it is in naturalistic context and hidden, as it often is, in intentionality and presupposition rather than in the above-the-water-line clarity. One the other hand it appears to be the clearest beacon to understanding reading that linguistics can offer. The future will be only as good as the cooperation across disciplines, however, for it will take all the insights of all the fields if we are ever to actually teach comprehension rather than to pretend we are measuring on standardized tests.

CHAPTER THREE

Five Misconceptions about Clarity and Simplicity in Beginning Reading Materials

One often overlooked element which contributes to a successful reading program is the appropriate writing and selection of reading texts. Good reading material for children is said to be simple and clear. Many people go through life never being able to be simple and clear in their writing ability and, worse, never achieving the ability either to define or recognize simple and clear language when they see it. There are many reasons why this happens.

The concept of language simplicity is, in itself, quite complex. Some astonishing and unfounded assumptions are frequently made about how people talk and write clearly. Adults trying to talk to babies or small children often feel that they are using simple, even child-like language in their efforts to communicate. Linguists who have studied such efforts have found that the baby-talk of adults is not at all simple and that often it is not even very similar to the way children speak. Writing for children has proven to be more difficult than anyone would have guessed and even many middle level teaching materials suffer from an inability to distinguish between an adult concept of simplicity and a child's concept of clarity.

In the current concern with "gobbledygook", it is sometimes assumed that authors could write clearly and simply if only they wanted to. In general, however, this assumption is unwarranted. On the contrary, it appears that much of the obtuse, confusing prose with which we are confronted is the direct result of misguided attempts to be precise, clear, and straightforward. In fact, some of the same concepts about language simplicity and clarity which characterize much of educational practice -- and which cause it so much difficulty -- appear to be equally present in beginning reading texts. This paper presents and explains five misconceptions about clarity in beginning reading materials.

Most of these misconceptions result from a failure to understand the organizational principles on which well-formed sentences and well-formed discourses are based. A language is highly structured at all levels. But most people, including reading specialists, when they think of language, think primarily of words. For various reasons related to how we are taught language, we consider someone who has a good command of the language to be one who has accumulated a large lexicon. It is not accidental that vocabulary is the most commonly used indicator of what is generally considered to be intelligence.

As a result of this focus on vocabulary, the common perception of language, including written language, can be viewed as somewhat like an iceberg:

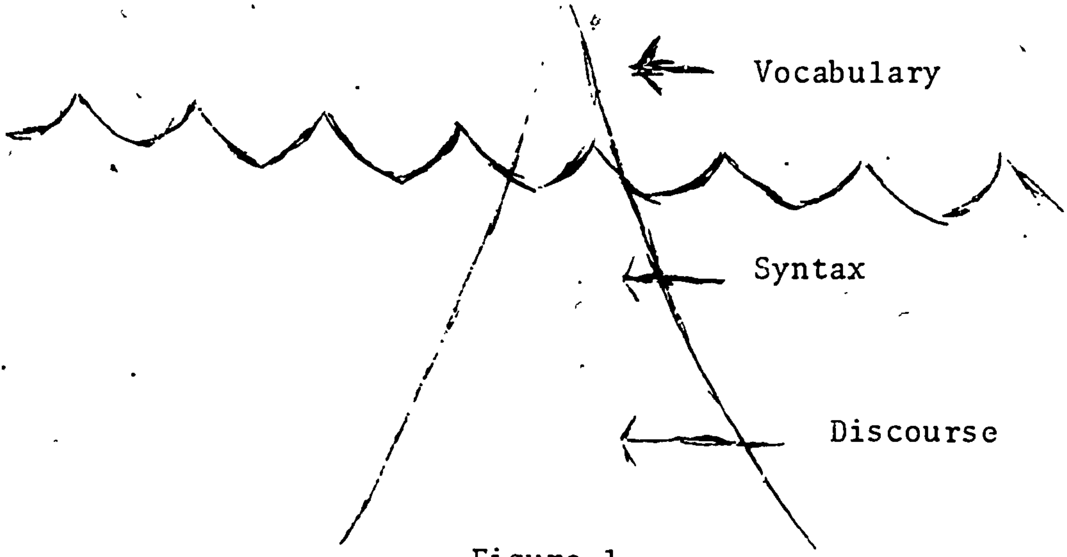

Figure 1

Language Structures Relevant to a Discussion of Clarity

In this figure, the language structure most easily observed is that of vocabulary. It is highly visible and easy to conceptualize. One might add that this very same figure could be used to picture the public perception of language learning. That which is easiest to teach is vocabulary. That which is easiest to measure is vocabulary. The unfortunate conclusion, therefore, is that if you teach vocabulary, you will teach the language. This is, of course, dangerously wrong.

For the purposes of analyzing the simplicity of reading materials, it is necessary to see beneath the water line. A great deal of the iceberg of writing rests beneath that level of visibility. It will not be possible to deal with either the concepts of simplicity of clarity without the perspectives of vocabulary, syntax and discourse, all working together.

With this in mind, then, let us note some of the common misunderstandings concerning clarity in writing.

1. That a limited inventory of words or sentence patterns will yield clarity. The misconception of clarity is widely held in the field of education, where considerable attention is given to "limited vocabulary", "controlled" spelling patterns and the repetition of a limited number of syntactic constructions. This approach is misguided on several counts. For one thing, there have never been acceptable studies of exactly what the given vocabulary or syntactic constructions should be for the developmental stages of learning. Reading texts are frequently devoted to limiting the number of words used to refer to a given concept. One gets the impression that if the text were to use two or more terms for the same concept, the child would be more likely to misunderstand. This results in passages like the following:

> Jill said, "Help Ben, Bill."
> Stop the ducks.
> Help Ben stop the ducks."

It appears that the effort to control the number of words used brings a kind of clarity at the word level but confusion and unnaturalness at the syntax and discourse levels. Nobody talks like this. Nobody even writes like this. Decoding may be aided but comprehension will be interfered with when the principle of limited inventory takes precedence over clarity of discourse.

The major negative effects of limiting the linguistic inventory are three:

(1) The resulting prose is very unnatural. Most speakers and writers do not use the same word over and over. From their earliest training and observation, people are taught to vary their use of words, to use synonyms and to avoid monotony in general.

(2) The resulting prose reduces redundancy. Much of communication is based on a kind of conceptual triangulation. We write or speak an idea one way, then restate it another way in order to provide two views of the topic to our listener or reader. This redundancy is conventional in formal writing (the introduction tells the reader what you are going to say; the body tells it; the conclusion tells what you have just said). It is common in most exposition (the point is articulated and then illustrated -- a kind of realistic retelling). When writers use the same words or phrases over and over,

they reduce the natural redundancy expected in communication. Thus, by limiting the number of words used to refer to a concept, one reduces the communicative redundancy which the use of different words for that concept can provide.

(3) The decision to repeat a single term rather than a variety of terms may mean that the term will be used in a wider variety of contexts than would normally be the case. In children's texts, for example, a decision is often made to use only a word such as know and to forgo realize or understand. The motivation to do so is honest and enlightened. The problem is that our language is not always subject to such logic. Know simply cannot easily substitute for every instance where realize or understand can be used. Likewise peace and tranquility are thought to be synonymous until we try to substitute tranquility for peace in expressions like peace conference.

The motivation for limiting the linguistic inventory in beginning reading materials may be perfectly reasonable. But such efforts can, and apparently do, run afoul of other language forces at work on the same passage.

2. That short items are better than long ones. This principle is often accurate but by no means is it universal. The word sphynx, for example, is shorter than merry-go-round but by no

means is it easier. A complex sentence, if well constructed, can be as clear or clearer than a short one. This principle of brevity preference was popularized by Rudolph Flesch in his various books on composition and reading. Out of it has grown the idea of readability formulae, most of which are based on the faulty assumption that short is clearer than long.

One way to convert long sentences into short ones is to reduce clauses into phrases. This sometimes leads to an increase in prepositional phrases and a decrease in verbs. The net result is a piling-up effect. For the reader, thsi means clarity at the phrase level but potential difficulty at the sentence and discourse levels. Once again, larger contexts tend to be overlooked in the effort to provide clear writing. The view is short sighted and rather myopic.

3. That repetition contributes to clarity. Again, the language of the classroom provides an interesting example. Early reading materials for children are filled with pedagogically motivated repetition such as, "Run, run, run! Run, Spot, run!"

In theory, the child learns from repeated reinforcement. Such repetition, however, is potentially dangerous to clarity of comprehension. It runs counter to another discourse principle, namely, that readers move from what they know to what they do not know, predicting the unknown from the known. Any repetition which yields unpredictable text blocks the reader's calling on what he knows about how language works or how the real world works, his two most important tools for understanding.

Consider this typical example of basal reader prose where the word turtle is repeated in every sentence.

Jill said, "...what do turtles like to do?"
Nan said, "Turtles like to hide.
Turtles like to eat.
But what will this turtle eat?"
Bill said, "Turtles like to swim.
But this turtle can't swim here."

One notices immediately the inordinate repetition of the word turtle in this passage. This repetition runs counter to natural principles of discourse organization. Whenever serial repetition takes place in written prose it is done either for artistic effect (as in Mark Antony's "for Caesar was an honorable man" line in his famous funeral oration) or it is in violation of the natural discourse rules of English. Pronominal forms enable us to avoid repeating the subject over and over. Rather than becoming clear, the repeated words provide interference to the readability. Something from the art of writing tells the writer to avoid using the same word at frequent intervals. It would appear in this instance that by limiting the inventory of terms, one also increases the frequency of occurrence of these terms. Inventory reduction and frequency of occurrence can be (and often are) opposing forces in the search for clarity.

4. That simplicity is equivalent to clarity. It is sometimes assumed that simplicity and clarity are the same thing. In other words, in order to be clear, language must be simple. A more sophisticated view asserts the very opposite: simple language is necessarily unclear and ambiguous. In this view, precision demands complex linguistic structure. Both views are false. To understand the relationship between simplicity and clarity, we need to talk about the various aspects of how a language is put together, i.e., the various aspects of linguistic structure, and we need to examine the various processes that are involved in a reader's making sense out of written text.

Consider, for a moment, just what it might mean for a stretch of writing or speaking to be "simple". Simplicity in syntax may be accompanied by complex vocabulary. Simple vocabulary may be presented in complex syntax. Simple syntax and vocabulary may be couched in very complex discourse structure. Simplicity, therefore, cannot be defined or measured in isolation from its various types of linguistic structures. As noted earlier, these linguistic structures include vocabulary, syntax and discourse.

5. That Latinate vocabulary is more complex than Anglo-Saxon words. The simplicity issue in vocabulary is often associated

with a choice between Anglo-Saxon and Latinate words. Since the English language is historically Germanic, it contains a number of basic forms which are monosyllabic and unaffixed. Likewise, because of historical events such as the Norman Conquest, English contains a large overlay of Latinate vocabulary as well. At one time, the language of the common man, of basic living, of the field was Anglo-Saxon in nature and the language of the wealthy, the courts and professions was Latinate. Today the Germanic and Latinate aspects of English vocabulary are richly intertwined. Nevertheless, the idea has developed that Latinate words are more sophisticated and complex than Anglo-Saxon ones. If that were the case, it would then follow that for the sake of simplicity, Anglo-Saxon words should replace Latinate vocabulary. Such a principle is short-sighted and dangerous simply because there are factors at work in the perception of clarity other than lexicon.

These five misconceptions about simplicity and clarity in reading materials must be addressed if one is to evaluate texts in any meaningful way. Most readability formulae are guilty of some or all of these misconceptions. Current measures of clarity and simplicity are inadequate along the lines noted above.

REFERENCES

Chomsky, Carol. "Stages in Language Development and Reading Exposure", *Harvard Education Review*, Vol. 42, No. 1, 1972.

Goodman, Kenneth. (Ed.) *The Psycholinguistic Nature of the Reading Process.* Detroit: Wayne State University Press, 1968.

Grice, H. P. Logic and Conversation. Cambridge, Massachusetts: Harvard University, 1967.

Griffin, Margaret. "Pragmatics", *Linguistic Reporter*, November 1974.

________________. "Reading and Pragmatics: Symbiosis," paper presented .I.R.A., 1973.

Smith, Frank. *Understanding Reading*. New York: Holt, 1971.

Wolfram, Walt. "Sociolinguistic Alternatives in Teaching Reading to Non-Standard Speakers", *Reading Research Quarterly*, Vol. 6, No. 1, Fall 1970. pp. 9-33.