THE RELATIONSHIP OF LANGUAGE AND LINGUISTICS TO READING

Sarah C. Gudschinsky

It is the purpose of this paper to discuss the relationship of language to reading, and the implications of this relationship for the teaching of reading, and for the choice of language of instruction.[1]

Language and Reading

In general terms, reading and writing involve the substitution of visual symbols for the audible symbols of speech. Learning to read and write is a process of learning to make this substitution. It is true, of course, that a person who is fully literate, after much experience and practice, appears to derive meaning directly from the printed page with little or no vocalization, but the fact remains that the learning is mediated by the spoken language.

I would propose a definition of literacy that emphasizes this relationship: that person is literate who, in a language he speaks, can read with understanding anything he would have understood if it had been spoken to him; and can write, so that it can be read, anything that he can say.

It should be noted that this definition makes literacy independent of the native intelligence of the reader, of his experience and judgement, and of the number of languages that he may be acquainted with.

In order to discuss the relationship of reading to language, we look briefly first at the nature of language structure.[2] Language can be described in terms of three aspects: phonology (the system of sounds), grammar, and lexicon. In each of these three aspects, there is a hierarchy of units. This is most familiar in the grammar, where we are accustomed to thinking of phrases as made up of words, clauses as made up of phrases, sentences as made up of clauses, paragraphs as made up of sentences, etc. There is also a hierarchical structure in the sound system, where syllables are made up of phonemes, stress groups are made up of syllables, etc. There is also a definite, though less obvious, hierarchical organization of the lexical content of discourses into sub-units of various kinds.

The languages with which we deal most frequently are written with alphabets;[3] that is, the individual phonemes are represented, more or less consistently and

accurately, by letters or groups of letters. This fact is sometimes partially obscured by the unfortunate irregularities of English spelling. It would seem that in the alphabetic language, the relationship of language to reading might be limited to the equation of phoneme and letter. Presumably, anybody who learned the sounds of the letters could then figure out any word, and so be able to read. (This is the reasoning behind the so-called 'phonics' methods which put primary focus on 'sounding out'.) A glance at the complex structure of the spoken language, however, shows this to be an oversimplification.

Control of individual phonemes is not sufficient for smooth speech. This can be easily observed in the speech of foreigners whose careful enunciation of individual sounds is not comprehensible if the normal rhythm and melody of the language are missing. It is also evident in the way in which a small child learns to talk: he begins by babbling the speech rhythms and intonation patterns. His first attempts to really talk are complete utterances, including one or more words with appropriate intonation. Individual phonemes are developed only as a growing inventory of utterances requires contrasting sounds to differentiate them.

Furthermore, evidence that syllables rather than individual phonemes are the most relevant units of recognition is found in the fact that the naive untrained speakers of most languages can slow words to their constituent syllables, but not to the phonemes. Many consonant phonemes cannot be pronounced in isolation without distortion.

All of this implies that the recognition of the individual letters should be within the syllable as a pronounceable matrix. It also implies the need for practice in reading the larger units which carry the intonation and are basic to intelligible speech. It seems probable that anyone who reads so slowly as to distort these larger patterns may have as much difficulty understanding his own reading as he would have in understanding the speech of a foreigner. It is small wonder that such readers sometimes fail to grasp the content of what they are reading.

Another oversimplification is the notion that the word is the best unit for the teaching of reading. In many systems, the pupils are expected to develop sight recognition of such words as 'up', 'at', and 'the', as well as 'grandmother', and 'elephant'. Oddly enough, the short 'easy' words like 'the' and 'at' continue to be difficult for children long after they have a sight vocabulary of dozens of nouns and verbs. Why? From the linguist's point of view, the words are of two quite different kinds: content words and 'function' words.

Content words include such things as nouns, verbs, and adjectives; function words include the prepositions, pronouns, conjunctions, etc. These different kinds of words can be roughly distinguished by the following criteria:

1. size and openness of the class. Content words belong to large classes (nouns, verbs, and adjectives account for the majority of the words in the dictionary), and these classes are open. That is, new words are constantly being added, as for example the nouns 'hippie' and 'astronaut', or the verbs 'to computerize' and 'to jet'. Function word classes are small, as for example, the limited number of pronouns in English, the two articles, etc. New words are very seldom added to the sets of function words.

2. isolability. The speakers of a language can usually say content words in isolation. They are usually not able to isolate the function word, as easily, especially those that have little lexical meaning.[4]

3. meaning. Content words usually have a referent external to the language as such; function words may have an external referent (as the pronoun 'I' does), but the primary referent is usually within the grammar (as in the case of the pronoun 'he' which refers to a masculine noun somewhere in the preceding context). Some function words have purely grammatical function, as does the 'to' in infinitive verb constructions.

The speakers of a language seem to be largely unconscious of the function words unless they are in direct contrast (as in 'I said in not on'), or unless a noisy environment makes them hard to hear and forces closer attention. The listener usually reacts to the function words more or less subconsciously, and focusses his attention on the content words.

For the teacher of reading, this implies a paradox: the pupil should be taught to recognize the function words at sight, as he recognizes them in speech, but he cannot easily focus on them out of normal context.

The paradox is solved by teaching and drilling the function words in a context of familiar content words. The prepositions, for example, can be drilled contrastively in prepositional phrases that answer questions such as: 'Where is the book? on the desk. Where is the paper? in the desk.' The end result of this kind of drill is not only the automatic recognition of the function words; it has as a by-product practice in reading entire phrases at a glance. This in turn encourages correct phrasing and intonation patterns in the reading.

Accurate recognition of content words in reading, as in speech, is conditioned by at least three factors: the sounds of the component letters, grammatical expectation, and lexical expectation.

The teaching of letters within syllable matrix has already been mentioned above.

Grammatical expectation operates at various levels. The choice between noun, verb, or adjective is often conditioned by the markers of phrase level structures such as articles (which lead one to expect a noun), adverbs such as 'very' (which lead one to expect an adjective), etc. If the pupil recognizes the function words at sight, he will be very unlikely to make an inappropriate choice of word class.

At clause level, the expectation of a subject or predicate further conditions hearing. The sequence 'John has a kitten'. might be misheard as 'John hates a kitten', but hardly as 'John house a kitten'. Similarly, at a still higher level, one expects 'to the store' or 'He went to the store' in answer to 'Where did John go?', but not the full form 'John went to the store'.

Recognition of the grammatical clues quickly and accurately is as important to reading as it is to speech.

It is evident at this point that much of the material that is written for the instruction of small children in our English speaking culture may actually make it more difficult for the child to recognize words, and impossible for him to check for himself to know whether or not he has read correctly. All too often there are sentences or sequences that are impossible in normal English. The classic example from an American basal primer ('Oh, oh, oh. See Dick') can probably be matched from other systems as well.

A further clue to word recognition is the lexical appropriateness of a particular choice. At lower levels of structure, appropriateness may depend on co-occurrence restrictions: buildings may be either tall or high, but men are only tall. The matter of expectation, however is much larger than the immediate context. The universe of discourse is also important. Each such universe of discourse has its own terminology: a ship has bulkheads, portholes, and deck; a house has walls, windows, and floor. A meal may be a luncheon, a lunch, or mess depending on the context. The pupil's familiarity with the universe of discourse is vital. All too often we have tried to teach rural children from stories about busses, zoos, and lifts - or city children from stories about birds, cows, and babbling brooks. The problem is even greater when the speakers of a minority language are

taught from textbooks whose language and culture are both foreign to him.

The Linguist's Role

It is evident that a person can only learn to read, in the sense presented here, in a language that he already speaks. He cannot learn to respond to various kinds of linguistic clues in print if these clues are meaningless to him and absent from his speech. The educational planner, then, has two choices: he must either teach the pupils in their home language and dialect, using literacy in that language as an aid in teaching a second language if necessary, or he must teach them to speak a second language well before using it as a medium of instruction for reading skills.

With reference to this choice, it may be noted that, fortunately, the process of reading need be taught only once. When a person has learned how to read, he adds new languages and dialects to his reading repertory by extending the inventory of symbols to which he can respond automatically. Time spent teaching someone to read a minority language is not time lost; he will come to the reading -- and speaking -- of the second language with enormously greater facility if he already knows what reading is, and is prepared to use it as a tool for learning.

The role of the linguist in the choice of a medium of instruction is to determine which language or languages the prospective pupils speak well enough to use for this purpose. The research must include not only major languages, but also the local dialect or social register that is used, including an extensive examination of the vocabulary. For example, not only would an American have difficulty with textbooks prepared for British or Australian pupils, but an underprivileged child of the city slums will have difficulty with textbooks prepared for middle class suburbanites.

When a language and dialect have been closen, the linguist still has a major role to perform as a member of the team that prepares or adapts reading materials, or as a member of the team that plans oral lessons in a second language as preparation for reading lessons in that language.

If a major language is chosen (as English, for example) one would suppose that a native speaker of the language could prepare materials that were true to his own language and culture without the help of a linguist. This is frequently not the case, however. There is a tendency for pedagogical considerations to obscure the linguistic realities of a language. An attempt to make reading material 'simple' often succeeds in dis-

torting it. And even some of the best of the traditional school materials have used the more pedantic formal written style, rather than the free colloquial that the pupils actually speak.

The problem is more acute if the persons preparing the materials do not speak the particular local dialect or social register of the prospective pupils. While they are learning the correlation between reading and speech, the materials should be what the pupils themselves might have said. To this end it is vital that their home dialect be represented, and that the vocabulary be confined to what is familiar. Where a socially substandard dialect is used by the pupils, the linguist may be able to find those structures and vocabulary items which are common to standard colloquial and the objectionable dialect.

In the case of little known minority languages, of course, the linguistic information must come from a linguist who has studied the language.

The following is a summary list of the minimum linguistic information that should be available to the authors of material for beginning reading instruction:

1. A comparison of the orthography with the phonemic structure of the language. Any discrepancies must be compensated for in the teaching. For this purpose, the linguistic analysis should take account of the native speaker's intuitions about his own language.

2. An analysis of the larger phonological units including syllables, rhythm groups, intonation patterns, etc.

3. A study of discourse types and their internal structure, so that the stories of the instructional materials can flow in the way that is natural to the pupil. This study should include special attention to types of dialogue and conversation. This is an excellent form for beginning reading inasmuch as it permits most naturally an approximation to the pupils' everyday speech. Narrative is often more formal and less familiar.

4. A study of phrase, clause, and sentence structure, with special attention to the use of the function words, and the contexts in which they occur.

5. A study of the vocabulary actually used by the prospective pupils, with special attention to the cultural correlates of the words.

If the decision is made to teach the pupils a second language as a medium for instruction in reading, the linguist might be expected to provide the following material:

1. A contrastive analysis of the phonology and grammar of the pupils' mother tongue and the second language, and an indication of the problems that they might be expected to have in learning it.

2. A vocabulary study of the pupils' own speech in their own language, to indicate the range of their experience and information. They should not be expected to deal with unfamiliar content in the materials designed to teach them the use of a second language.

Footnotes

[1]A preliminary version of this paper was presented at the April 1968 meeting of Kivung, at the University of Papua and New Guinea.

[2]The linguistic theory reflected here is the Tagmemic model of Kenneth L. Pike. See his Language in Relation to a Unified Theory of the Structure of Human Behavior. Mouton, 1967 (second edition).

[3]There are of course, some languages such as Amharic in which the unit of symbolization is the syllable, and others such as Chinese in which the unit is lexical rather than phonological.

[4]Our awareness of this difference in isolability is hampered by our schooling. Learning to read and write has brought the function words into focus, since they are written as separate words in English. This focus has been intensified by our studies in elementary English grammar. It is only small children and other illiterates of whom the statements are fully true.

Revised version of talk given to KIVUNG, the Linguistic Society of the University of Papua and New Guinea, Port Moresby, September, 1968.