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SOURCES OF KNOWLEDGE FOR THEORIES OF READING

Marion D. Jenkinson

I am perhaps being bold, not to say foolish, to undertake to speak to the topic of this paper. My reasons for consenting to do so spring from my own need to explore why, after seventy-five years of research and investigation, there has not emerged a coherent construct within which we can examine reading. Two aphorisms point up my dilemma. "Experience keeps a dear school but fools will learn in no other". (Benjamin Franklin) Yet, on the other hand, as an old Welsh proverb states, "Experience is the fool's best teacher; the wise do not need it".

This paper, then, will attempt first to suggest why this failure has occurred, and then will indicate some points of departure which may be productive for the gradual evolution of theories. More questions will be posed than answers given, but it was Einstein who reminded us that the asking of the right questions may lead to greater knowledge than the discovery of scientific facts. Yet again, I must counteract this with another adage "The greater fool may ask more than the wisest man can answer".

The following topics will be discussed briefly in the remainder of this paper: the reasons for the failure to evolve theories, model making in reading, some questions concerning the assimilation of meaning, and triad of sources for a reading model.

*Dr. Jenkinson is on the faculty of education of the University of Alberta at Edmonton.

Reasons for Failure to Evolve Theories

The first reason is not peculiar to the reading field, but has great pertinence for it. I have been concerned recently with educational epistemology. (Jenkinson 1967) My own concern has been supported in the United States by Cooper (1967). What *are* the sources of our knowledge in education? It seems to me that the traditional six ways of knowing, identified by philosophers-appeal to authority, intuition, formal logic, empiricism, pragmatism, and scepticism–should all be applied to our endeavours to know more about what is happening in education. Of course, some of these methods are superior to others for certain purposes, and their effectiveness will depend upon the nature of the thing to be known. My quarrel is that because the empirical method has proved so effective in scientific enquiry, we in education have allowed this to influence us too exclusively. Educational evidence which is not labelled "research", or does not present evidence in what is often a pseudo-scientific manner, is usually suspect.

More recently the term "development" or "experiment" has become the magic lamp, by rubbing which we hope to solve our educational problems. On the surface this new dogma appears to espouse pragmatism, the method of evaluating things on the basis of their palpable effects. Yet the variety of conclusions, and the conflicting and partial nature of the evidence from the myriad of reading programs and innovations of the past decade, not only leads to scepticism but also calls for prudence in application of any of the findings. We are still far from codifying the experiential proof of these efforts since we are still at such a primitive stage of collecting significant data. It has been demonstrated frequently that the teacher is the one single important variable contributing to reading success. Yet we are only just beginning to realize that we must examine, in depth, the teacher's behaviour and, particularly language performance, in terms both of linguistic mastery and the ways in which language is used to elicit learning.

Another common error which has crept into our educational thought arises from a mistaken notion even of scientific truth. As Wiseman (1966) has suggested:

> Development in the history of science which has led to a clearer and more widespread realization that the distinguishing marks of a scientific hypothesis, as compared, for example, with an affirmation, or belief, is the fact that it

> must be intrinsically *susceptible to disproof,* rather than that it can be proved to be true. The most that can ever be said about the truth of a hypothesis, even in the more highly developed of the physical sciences, is that all the results obtained so far are in line with what we would have predicted from it.

In reading, we frequently fall into the trap of attempting to "prove or produce" evidence that one method or set of materials is superior to another. Sometimes the burden of truth should lie rather with the established mode. The efficacy of innovation might well be subject to disproof rather than proof.

When one examines the epistemology of reading, it appears that superficially we cover the range of sources suggested above. Yet, I would argue that we need to acquire a true appreciation for a balance of all six methods and develop the skills of knowing when to select the most appropriate one or combination of them for the specific reading area we are examining.

This is not just another plea for an eclectic approach to reading. We should rather recognize those specific and peculiar contributions that differing sources of knowledge, as well as different disciplines, can make. Too often the "eclectic approach" has served to camouflage rather than elucidate our concepts.

Model Making in Reading

Model making in many aspects of education, including reading, is playing a new role. Hopefully, this desire to create models will not decline in to a mere mystique, but will enable us through their construction to show interrelationships between concepts and to suggest areas of ignorance. The Maccias (1966) have suggested that educational theorizing might profit much through the use of models, though it is acknowledged that model making in education, as in all the social sciences, is of a special kind and perhaps of greater complexity than that encountered in the sciences. However, as Eastwood (1966) suggests, though there are many ways of using the term *model,* a systematic enquiry model, the end product of which is explanation rather than a solution of various problems, is most appropriate for people in education to consider. Eastwood further suggests that this may be conceived as a system of four dimensions – the referential, the theoretical, the experi-

mental and the validational. Such systems should provide a general model which encompasses the framework for the derivation of specific models from which testable hypotheses can be deduced.

One of the most common misunderstandings is that the word *model* is seen as synonymous for theory. It is not appropriate to discourse at length on the distinctions and variety of definitions of the two words. There is a consensus, however, that the two terms are not identical. George (1966) compares a model to a skeleton, whereas the relevant theory can be compared to the complete organism.

My reference to this current work of enquiry into models and theories is really to suggest that in reading we must become more sophisticated in our model making. Several models have been used in reading. The earliest ones were by Gray (1960) with later additions by Robinson (1966). Holmes (1965) used factor analysis to produce his substrata-factor theory of reading, while Smith (1963) has adapted Guilford's model of the intellect to the reading process, and more recently McCullough (1968), Kingston (1961), and Cleland (1965) have suggested other models.

All these models, it is true, attempt to clarify and explicate the relationships between one facet of reading and another. Unfortunately, however, until comparatively recently, they have attempted to cover too many facets in reading. The intellectual, hynamic activity of the reading process has been confused by linking this with the techniques and skills which need to be acquired in the "learning to read" process. In addition, the learning and teaching activity are rarely examined independently.

As I have suggested elsewhere, it would seem that future models should not attempt, at least in the beginning, to be all inclusive. (Jenkinson, 1968). We need a series of models of various aspects of reading which may ultimately be capable of being integrated. But a model which deals with the reading process as such, which includes the cognitive interactions, the impact of language and linguistic considerations in the affective as well as in the cognitive domain, and will then attempt to relate these reading operations to other aspects of thinking, is perhaps the most urgently needed. Part of this process may be the differentiation of the reading-thinking action from every other human activity, including ordinary thinking. I feel that this may be a productive point of departure.

A quite separate model is needed to show the interrelationship

between the skills, techniques, materials and media involved in the decoding process. This will then lead to the way in which the child gradually assimilates the understanding of the word which is decoded. Yet the assimilation of understanding at this period will not be identical with the very different aptitudes of the mature reader. It would seem that the acquisition of encoding and decoding in children as they progress through school is entirely dependent on their developing perceptual activities and the acquisition of the appropriate, systematic, cognitive abilities. The extent to which the developing abilities influence the amount that the child can assimilate from his reading is still largely a mystery. We do know, however, that as he matures he can apparently understand increasingly complex material. It would seem to me that we shall make greater progress if we do not attempt to account, at least in the same model, for both the developing reader and the mature reader.

One of the problems that continues to plague us is that we lack accurate definitions in reading. It has become imperative that we somehow attempt to agree on some terms within the field. Several of the contributors to the N.S.S.E. volume *Innovation and Change in Reading Instruction* (Robinson, 1968) commented on the problems attendant on trying to simplify ideas from research and experimentation because of the lack of agreement on definitions. Spache (1968) also suggested that the confusion has been further confounded because many of the disciplines which have contributed to our knowledge of the field of reading have their own distinctive terminology for the basic components of reading. The varied uses of terms to describe conditions or concepts which are often quite similar not only interfere with our exchange of information but retard our ultimate progress toward greater knowledge.

Many sciences have experienced this problem but the time has come, as it did in the other sciences, when a general acceptance of some definitions is essential. It is true that the way to good definitions is paved with difficulties. As Dewey has reminded us, the twin demons of vagueness and ambiguity frequently impinge upon salient definitions. It is ironical, too, that language itself is a major deterrent in accurate defining. Dewey (1933) wrote with cogency on this point.

> A constant source of misunderstanding and mistake is indefiniteness of meaning. Because of vagueness of meaning,

> we misunderstand things ourselves. Because of ambiguity, we distort and pervert. Conscious distortion of meaning may be enjoyed as nonsense; erroneous meanings may be followed up and got rid of. Vague meanings are too indefinite to allow for analysis and too bulky to support other beliefs. Vagueness prevents testing and responsibility and disguises the unconscious mixing together of half understood concepts. It is aboriginal, logical sin, the source from which most bad intellectual consequences flow. To totally eliminate indefiniteness is impossible. To reduce it in extent and force requires sincerity and vigour.

The nature of definitions has plagued us from the time of the Greeks, but recently philosophers such as Robinson (1965) have come to some general conclusions about the attributes of functional definitions, and of these we must become aware. Our definitions at one and the same time must be inclusive but never so restrictive that they cannot function. Definitions in reading as in all other sciences must be relative. They must be capable of changing in both basic concepts and in content, as new ideas appear. Thus, it would seem that the only definitions we can use would be tentative or stipulative definitions, for should rigid definitions be used, these would belie the dynamic character of language and further restrict investigation. Wittgenstein has aptly stated that definitions should not be permitted to give us mental cramp and rigidly limit exploration. Reading as an act and a process may in the end be the most difficult of all to define. Perhaps reading, like mystery, can only be described and evoked.

Moreover, we are often faced in the field of reading with the sceptics who often exist among the practitioners who deny the use or validity of theories. Perhaps the conept that "it is all right in theory but it won't do in practice" is merely a way of rejecting something which is difficult to understand. Black (1946) has indicated that Schopenhauer (1932) said all that needs to be said about this type of sophistry.

> The assertion is based upon an impossiblity: what is right in theory must work in practice. And if it does not there is a mistake in the theory; something has been overlooked and not allowed for and consequently what is wrong in practice is wrong in theory too.

And now having examined several problems which seem to have

been major deterrents to the formulation and evolution of useful theories about reading some questions will be posed concerning the assimilation of meaning, since this is basic to the mature reading process. Then some of the sources of knowledge from which we might seek further enlightenment will be examined briefly.

Some Questions Concerning the Assimilation of Meaning

It is a truism that part of our problem in developing a theory has been the complexity of the process involved. Reading must engage the total organism. The recent distinction made by Wiener and Crombер (1967) between acquisition and assimilation of meaning I think is one we have needed to examine for some time.

However, there are innumberable questions to which we still need answers. I can only pose a very few of these at the present time.

(1) Is reading comprehension synonymous with thinking? The converse obviously is not true, but if reading is considered to be a type of thinking which is triggered by the printed rather than by the spoken word, what are the controlling variables of the thinking thus aroused?

(2) How does this thinking differ from all other types of thinking? It obviously must be controlled to an extent by the thought indigenous to the writer, but though the reader's thought is controlled by the content, he frequently has to interpolate and extrapolate in order to get the full impact of the author's meaning.

(3) What are the differences between spoken and written language? This could apply to the ways in which the thoughts are engendered but is also very important in our understanding of the problems that will face the reader but which may or may not be apparent if the ideas are expressed orally.

(4) What are the respective functions of the lexical and structural elements within written material? Again, beginning has been made on this but we need more information.

(5) What are the variables residing within the reader which enable him to become receptive to the message of the author? What is the influence of past experience, of prejudice, of bias, of attitudes, of personality variables? What is the effect of general and immediate motivation, of interests, of attitudes of rigidity, or personality structure, of the cognitive style of the reader and his ability to initially submerge his concepts for those of the author? And these constitute but a few of the variables inherent in the reader.

(6) What problems arise because of the level of abstraction of the material that is being presented? This is apposite for the mature reader as well as the child learning to read. Moreover, undoubtedly the reader will be more or less successful according to his familiarity with the content of the matter he is reading and the type of "language game"* which is being undertaken by the author.

(7) How do the separate and disparate experiences of individuals lead to a common acceptance of general meaning but which also permit differences of interpretation? What is going to be the future of literacy as compared with "oracy"? [*cf.*, McLuhan (1964)]

(8) Perhaps we need to examine the axiology of reading, the values gained from reading, particularly in the light of current contentions that "oracy" rather than literacy has become the pervasive means of the immediate conveying of meaning. It appears that written material, however, will continue to play an active part in conveying and relating meaning from one area to another and from one generation to another. Since reading permits more effective thinking, the written word will continue to be the most efficacious influence in knowledge extension and exhange in every sphere. [*cf.*, McLuhan (1964), p. 168]

The answers to these questions will be complex, but by examining some recent development in "basic" fields we may obtain productive insights.

*cf., Wittgenstein, (1958).

A Triad of Sources for a Reading Theory

Although psychology and linguistics were once studied as part of the philosophy of mind, the three subjects are now pursued separately. Chomsky (1966) has himself suggested that this resulting speculation without rational attempts at synthesis has been detrimental to our knowledge of language and its functioning. A very cursory examination follows of each of these three areas of philosophy, psychology and linguistics as they might contribute to some of the questions posed above.

Philosophy

Philosophers have been concerned for the past thirty years with the problems involved in how meaning is obtained through language. If any current journal of philosophy, either British or American, is selected it will be noticed that much of its content is concerned with language and the strategies involved in language functioning.

Wittgenstein, some thirty years ago, by his insistence that most philosophical questions turned upon the meaning of the language in which the questions were posed, inaugurated this movement for clarity. He emphasized the problems which words impose upon thought and also the problems which thought imposes upon words and the ideas these words attempt to convey. He insisted that meaning was the "meaning of the word *in use*" and that all communcation was dependent upon both parties being aware of the "language game" in which they were engaged. Language of science will necessitate an entirely different set of rules and strategies than the language of poetry. It is a different language game.*

Austin (1962) distinguished between statements and the "performative" "utterances" and finally replaced this with a more inclusive general theory of "illocutionary" forms which have "perlocutionary" effects. In attempting to analyze the impact of language he termed a "performative" utterance, one in which we purpose to be doing something in saying something: e.g. "I *judge* this to be the best dog in the show" or "I promise.....", or "I appoint you.....". These sentences are neither true nor false, but in

**cf.*, Wittgenstein, (1958).

the event that there is failure to do what is purported, the utterance becomes null and void. An "illocutionary" utterance is one which contains some sort of action. It contains the performance of an act *in* saying something as opposed to the performance of an act *of* saying something. Illocutionary acts are those of informing, ordering, warning, undertaking, etc. "Perlocutionary" effects are those which are brought about when words such as "convince", "persuade", "deter", etc. produce the desired results, e.g. "I persuaded him to stop teasing the cat". These differing yet interlinked utterances producing acts are differing senses or dimensions of the "use of a sentence", or of "the use of language". There are, of course, many more differing types of utterances than the three illustrated. However, discussion of the purpose of utterance has obvious impact upon assimilation of meaning.

The noted American philospher Quine (1960) has been exploring the relationship of the notion of meaning and the linguistic mechanisms of objective references, as expounded in his book *Word and Object.* He insists that the meaning of a sentence is not an external entity, but is embodied in the words used. The problems of translation, explanation, and explication in terms of language are explored. He examined the anomalies, ambiguities and conflicts implicit in the referential implications of language. In his most recent series of lectures -- the Dewey lectures 1968 -- Quine (1968) is exploring "ontological relativity" as it pertains to language. Quine recognized the complexity of the problems facing us in language learning:

> The semantic part of learning a word is more complex than the phonetic part, therefore, even in simple cases, we have to see what is stimulating the other speaker. In the case of words not directly ascribing observable traits to things, the learning process is increasingly complex and obscure; and obsurity is the breeding place of mentalistic semantics. What the naturalist insists on is that, even in the complex and obscure parts of language learning, the learner has no data to work with but the overt behaviour of other speakers. (p. 186)

He includes, however, the problem of extension reference and the attendant difficulties upon our knowledge of these references.

Langer, on the other hand, found the ordinary language of

words so complex for explaining exact meaning that she continued the work of Whitehead and emphasized the value of symbolic forms to convey logical ideas. In her most recent work (Langer, 1967) she is beginning to throw some light on cognitive functioning and its relation to language. Her new attack on the problem of mind and its functioning involves biology, biochemistry and psychology as well as philosophy. She attempts to contribute to a concept of mind adequate and acceptable to both the sciences and the humanities.

> "The enormous power of language, whereby we are enabled to form abstract concepts, concatenate them in propositions, apply these to the world of perception and action, making it into a world of "facts", and then manipulate its facts by a process of reasoning, springs from the simpleness of discursive projection". (p. 102)

These are but a few of the many philosophers who have turned their attention to the elucidation and illumination of the way ideas are conveyed through language and these studies and many others are of obvious relevance to our study of reading and its comprehension.

Another philosopher, (Findlay, 1968), has heartened me considerably. He writes:

> Modern philosophy is distinguished by the emergence of a new question: how to give meaning to the expressions used in ordinary and philosophical discourse. Earlier philosophers simply inquired into the truth of this or that assertion, without troubling to raise the prior question as to what precisely such an assertion meant, or whether it really meant anything at all. When the question of sense has been raised, it led to yet another inquiry: in what way or ways a sense had been *given* to some assertion, or in what way or ways a sense *could* be given to it. The question led to yet another question... in what way or ways the sense of an expression could be *taught* or imparted, so that many men could use the expression in an identical way, and give it the same sense. This obviously is a truly fundamental question. For it is plain that most expressions acquire sense for use through a process of teaching. (p. 72)

At least this indicates that the vital knowledge of language functioning is capable of being learned and, therefore, presumably of being taught.

Linguistics and Psycho-linguistics

Again, I can only suggest it is presumptuous of me to attempt in a short period of time to indicate what further contributions might be obtained from the linguists and particularly now because of their closer relation to psycho-linguists.

Part of our problem has been in the past that there have been so many differing schools of thought about language structure and functions that it has been almost impossible for anyone outside the field to make any appropriate synthesis of its findings. Perhaps it was unfortunate, too, that in the fifties the interest of most linguists in reading was concentrated almost exclusively upon the grapheme-phoneme relationship. It is only more recently that several of the branches of linguistics and psycho-linguistics have begun to explore the effect of structure and lexical meaning on the understanding of language.

Some descriptive linguists, interested primarily in analyzing non-Western languages in order to provide viable writing systems for them, produced grammars and alphabets adequate for their purposes. Applied English linguists relate some of these descriptive methods to the English language and writing system. Abercrombie (1965) has begun to sharpen our awareness of the great differences between actual everyday speech, on the one hand, and the "texts" of spoken English analyzed by linguists and English deliberately organized for visual presentation (prose), on the other. And although Abercrombie's book is quite revealing, it does not indicate the more subtle differences the reader must perceive to obtain a meaning closely approximating what he might obtain from the primary source of speech.

Lefevre (1964) was one of the first to point out the implications for reading of the complex interplay of spoken and written English language patterns -- above the level of phonemes and graphemes. He emphasized that in reading instruction we must recognize and teach the essential grammatical and syntactical clues in printed English, particularly those that suggest intonation: stress, tune, and junctures or terminals. Insensitivity to some of these signals, I suspect, may underlie problems of differing

interpretations that are accorded to much written material. As Lefevre (1968) said in a recently published paper, intonation and sentence patterns are critically important subsystems of the English structural system and are essential to meaning in both speech and writing; moreover, in addition to their lexical meanings, the syntactical functions of words, signaled by grammatical inflections and derivational affixes, must be perceived as important clues to meaning in reading printing English just as they are in hearing English spoken.

At this point, apparently some linguists are beginning to explore analyses of structures at higher levels than that of the single sentence. This discourse analysis, it seems to me, will have an important impact on our understanding of meaning as will be the tagmemicists' analysis. Both these suggest the possibilities of useful new insights into larger structures of the exposition of all types of prose. The work in this field has primarily been directed towards writing but it seems that it should have pertinence to reading, too.

Undoubtedly the work of Chomsky and the transformational grammarians in revealing that sentences, and thus discourse as a whole, had both a surface and a deep meaning, has had much to offer in expanding our knowledge of how meaning is conveyed. The embeddedness of meaning in deep structures is apparently learned comparatively easily by a child, but although he may use the structures adequately in performance, he may face a very difficult task when he receives these from others. Goodman (1964), in his insistence on the types of miscues which can lead to major errors in understanding, has indicated one of the most productive ways of furthering our understanding, since it is often by examination of errors made rather than by competence revealed, that our knowledge in any field is enhanced. The distinction which linguists have made between linguistic performance and linguistic competence, as Wardhaugh (1968) has suggested, may be a very important one for our assessing the ability of students to obtain meaning from what they need. This competence at the spoken level may vary quite considerably from the linguistic performance in reading. It may be that the reader will only catch the superficial interpretation and will fail to take into account the more deeply embedded structural elements which occur in the printed word. The printed word tends to be more complex and thus contains more latent embeddedness. Inci-

dentally, the discrepancy between linguistic competence and performance is very evident in children as some recent research by Lyons and Wales (1966) in Britain has shown.

Again, in a sense, I have only dabbled in this vast field of linguistics. My plea is, however, that we continue to use the emerging findings of the linguists and incorporate these into our theories and ultimately into our teaching or reading as efficiently and effectively as possible.

Psychology

It is perhaps most difficult to summarize the contributions of psychology to our knowledge of the reading *process* because they are so diverse. A great many of the findings of behavioral analysis, of child development, including child cognition, of general learning theory, of theories of perception, and of problem solving have been applied to the *teaching* of reading, but few have examined these findings in the light of the mature reader obtaining meaning. In addition, there are so few studies which have focused in depth upon any one area which extend our knowledge of the reading process *per se.*

The work on cognition is so far the most fruitful field. Undoubtedly Guilford's (1959) model of the intellect has stimulated many workers to explain the relationships between the parameters suggested. When this model, however, was applied to reading there were obvious gaps, inconsistencies, and invalidities. Ausubel's (1967) concept of the pervasiveness of receptive learning as opposed to the less frequent opportunities for discovery learning is also pertinent. The reading process is obviously one of the main vehicles for such receptive learning. The need to know, the "epistemic curiosity" described by Berlyne (1965) has also obvious implications, since books are still a prime source of knowledge. Skinner's concept of verbal behaviour is also pertinent. Perhaps we are in more need of workers such as Carroll, who synthesized both in 1959 and 1964 the relationships between psychology and language, than we are of direct researchers.

The concept of the impact of a distinctive cognitive style on all aspects of personality variables, including those of attitudes, flexibility and ability to tolerate ambivalence, is receiving attention from a variety of psychologists, but as yet there is little to be applied to reading.

The psychology of motivation, including that of interest, is moving forward too, but again the results are scattered and still appear to apply to experimental rather to real life situations. We need to know more than the superficial interest of what and why people read, but also how they read. The attempt by Gray and Rogers (1956) remains the only thorough study which tries to assess the differing levels of adult reading competence linked with their interests.

There have been a few attempts, mostly by people within the field of reading, to analyze the reading process, but again few of these have dealt with mature readers. The majority of these studies have examined errors made in comprehension in an effort to determine what caused differing interpretive responses. Strang (1965) has given an admirable summary of these to 1965.

Thus, from a psychological point of view, the reading process is dependent upon a reader's prerequisites for learning, his language competence (including reading) and his attitudes and goals. Yet, all these may be vitiated by chemical or neurological factors, of which our knowledge is still minimal.

Conclusion

I have merely explored some of the fringes of those areas of knowledge which seem to impinge upon the eternal conundrum of the meaning of meaning in reading. To develop an appropriate theory, it is evident that we need to bring together related disciplines in co-ordinated research efforts. The most productive insights frequently emerge from the interplay and friction between the differences of disparate disciplines, from the interfaces where the knowledge of one area borders on another. Regretfully, too, frequently one discipline disparages another, and I can only deplore that too often people in the reading field have reacted negatively to some of the attempts of other disciplines to explain the reading process. But other scholars must also share some of the blame. I think all partners in this future voyage of discovery into the nature of the reading process must move forward in humility, each recognizing the limitations of his own discipline honestly, but also ensuring that the wide avenues of educational epistemology are continually kept open.

In this discussion I have probably revealed my own ignorance more than enlightened yours and undoubtedly as Gray once wrote

of the Eton College boys:

> Thought would destroy their paradise
> No more: where ignorance is bliss
> 'Tis folly to be wise.

No doubt it has been foolish wisdom to dally in this, the various sources of knowledge which might illumine the reading process.

Yet again, I am reminded of an appropriate section of Lewis Carroll's *Alice through the Looking Glass,* a section favoured by philosophers.

> "When I use a word," Humpty Dumpty said, in a rather scornful tone, "it means just what I choose it to mean, neither more nor less."
> "The question is," said Alice, "whether you *can* make words mean so many different things."
> "The question is," said Humpty Dumpty, "which is to be the master, that's all."

This passage is usually used to emphasize the intractibility of language. In reading, the meanings of words, lexical, syntactical and structural, determine to a large extent what the reader *can* comprehend of the writer's ideas. Unless this is so, then the other Humpty Dumpty fable must ensue, and "We shall never put him together again."

REFERENCES

ABERCROMBIE, D. O. *Studies in Phonetics and Linguistics.* Oxford: Oxford University Press, 1965.

AUSTIN, J. L. *How to Do Things with Words.* (The William James Lectures at Harvard University in 1955) (Edited by J. O. Urmson.) Oxford: Clarendon Press, 1962.

AUSUBEL, DAVID PAUL. *Learning Theory and Classroom Practice.* Toronto: Ontario Institute for Studies in Education, 1967. Bulletin no. 1.

BERYLNE, D. E. *Structure and Direction in Thinking.* New York: Wiley, 1965.

BLACK N. *Critical Thinking.* Englewood Cliffs, New Jersey: Prentice-Hall, 1946.

CARROLL, J. B. "An Operational Model for Language Behaviour." *Anthropological Linguistics.* 1:37-54, 1959.

CARROLL, J. B. "Linguistics and the Psychology of Language." *Review of Educational Research.* 34:119-126, April 1964.

CARROLL, LEWIS. *Through the Looking Glass.* Oxford: Clarendon Press.

CHOMSKY, N. *Cartesian Linguistics: A Chapter in the History of Rationalist Thought.* New York: Harper and Row, 1966.

CLELAND, D. L. "A Construct of Comprehension." *Reading and Inquiry.* (Edited by J. A. Figurel.) Conference Proceedings vol. 10. Newark, Delaware: International Reading Association, 1965. pp. 59-64.

COOPER, J. A. "Why the Monopoly in Epistemology?" *Phi Delta Kappan* 48:406, April 1967.

DEWEY, JOHN. *How We Think.* Boston: Heath, 1933.

EASTWOOD, G. R. "Uses of Models: Another Dimension." *Alberta Journal of Educational Research* 12:230, September 1966.

FINDLAY. "The Teaching of Meaning." *Thinking and Meaning.* Entretien d'Oxford, Organises par l'Institute Internationale de Philosophie, Editions Nauwelaerts, Louvain, 1963.

GEORGE, F. H. Quoted in "Models in Education." *Alberta Journal of Educational Research* 12:168, September 1966.

GOODMAN, K. "A Linguistic Study of Cues and Miscues in Reading." Paper delivered at the American Educational Research Association, Chicago, February 21, 1964.

GRAY, W. S. and ROGERS, B. *Maturity in Reading: Its Nature and Appraisal.* Chicago: University of Chicago Press, 1956.

GRAY, W. S. "The Major Aspects of Reading." *Sequential Development of Reading Abilities.* (Edited by H. M. Robinson.) Supplementary Education Monographs No. 90. Chicago: University of Chicago Press, 1960. pp. 8-24.

GUILFORD, J. P. "Three Faces of Intellect." *American Psychologist* 14:469-79, August, 1959.

JENKINSON, M. D. "Dispersed Meditations on Curriculum Evaluation." Paper presented at the Third International Curriculum Conference. Oxford, England. September 1967.

JENKINSON, M. D. "Reading: An Eternal Dynamic." Paper given at the presentation of the N.S.S.E. Yearbook, April 1968. *Innovation and Change in Reading Instruction.*

HOLMES, J. S. "Basic Assumptions Underlying the Sub-Strata Factor." Reading Research Quarterly 1:4-28, Fall 1965.

KINGSTON, A. J. "A Conceptual Model of Reading Comprehension." *Phases of College and Other Reading Programs.* (Edited by E. P. Bliesmer, and A. J. Kingston.) Milwaukee: National Reading Conference, 1961. pp. 100-107.

LANGER, S. K. *Mind: An Essay on Human Feeling,* Vol. 1. Baltimore: Johns Hopkins Press, 1967.

LEFEVRE, C. A. "A Multidisciplinary Approach to Language and to Reading: Some Projections." Detroit, Michigan: Wayne State University Press, 1968. pp. 289-312; 333-36.

LEFEVRE, C. A. *Linguistics and the Teaching of Reading.* New York: McGraw-Hill, 1964.

LYONS, J., and WALES, R. J. *Psycho-Linguistic Papers.* Edinburgh: The University Press, 1966.

MCCULLOUGH, C. M. "Balanced Reading Development." *Innovation and Change in Reading Instruction.* N.S.S.E. Yearbook Part II, 1968. Chicago: University of Chicago Press, 1968.

MCLUHAN, H. M. *Understanding Media: The Extensions of Man.* New York: McGraw-Hill, 1964. p. 168.

QUINE, W. V. "Ontological Relativity" The Dewey Lectures, 1968. *The Journal of Philosophy* 65: 185-212, April 1968.

QUINE, W. V. *Word and Object.* New York: John Wiley, 1960.

ROBINSON, R. *Definition.* Oxford: University Press, 1965.

ROBINSON, H. M. "The Major Aspects of Reading." *Reading: Seventy-Five Years of Progress.* (Edited by H. Alan Robinson.) Supplementary Educational Monographs. No. 96. Chicago: University of Chicago Press, 1966, pp. 22-32.

ROBINSON, HELEN M. Ed. *Innovation and Change in Reading Instruction, Sixty-Seventh Yearbook of the National Society for the Study of Education.* Chicago: National Society for the Study of Education, 1968.

SCHOPENHAUER, G. *The Art of Controversy.* Oxford University Press, 1932.

SKINNER B. F. *Verbal Behavior.* New York: Appleton-Century-Crofts, 1957.

SMITH, D. E. *Toward Better Reading* by G. Spache. Champaigne Garrard, 1963. pp. 67-72.

SPACHE, G. D. "Contributions of Allied Fields to the Teaching of Reading." *Innovation and Change in Reading Instruction, Sixty-Seventh Yearbook of the National Society of the Study of Education.* (Edited by Helen M. Robinson.) Chicago: N.S.S.E., 1968. pp. 237-290.

STRANG, R. *The Reading Process and Its Ramifications.* Invitational Address, International Reading Association, Delaware, 1965, pp. 49-74.

WARDHAUGH, R. "Recent Research in Linguistics." Paper delivered at the 12th Annual Convention of the International Reading Association, 1968.

WIENER, M., and CROMER, J. "Reading and Reading Difficulty: A Conceptual Analysis." *Harvard Education Review.* Fall 1967. pp. 620-643.

WISEMAN, S. *Curriculum Evaluation.* Mimeograph, 1966. p. 21.

WITTGENSTEIN, L. *Philosophical Investigations.* Oxford: Basil Blackwell, 1958.