

7-1-1980

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Recommended Citation

Carey, R. F. (1980). Toward a More Cognitive Definition of Reading Comprehension. *Reading Horizons: A Journal of Literacy and Language Arts*, 20 (4). Retrieved from https://scholarworks.wmich.edu/reading_horizons/vol20/iss4/11

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TOWARD A MORE COGNITIVE DEFINITION OF READING COMPREHENSION

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Perhaps the most pervasive and unsettling problem confronting the community of reading educators, researchers, and theorists is the lack of a commonly held view of the precise nature of reading comprehension. "Comprehension" has developed denotative and connotative characteristics which befuddle even the most serious students of language and language processes.

This paper proposes, as a partial solution to this vexing situation, a straightforward theoretical construct as a lexical equivalent of the technical term. The focus here is upon relating reading comprehension to a variety of research and theoretical paradigms which lend themselves to divergent interpretations, but which have a common conceptual base.

It should be noted at the outset that the perspective from which this paper is written obviates the inclusion of a variety of commonly held notions concerning the definition of "reading comprehension." In brief, the following assumptions are held to be less than complete in their descriptions of the term:

1. That comprehension is a possession of the individual upon completion of the reading act.
2. That comprehension is a product of the reading process.
3. That comprehension is the final link in an essentially non-mentalistic associative chain.
4. That comprehension is a sequence of skills, each skill somehow serving as a component of a complete entity.
5. That comprehension is somehow the equivalent of a sub-vocalized decoding (e.g., "rauding") in the sense that it is a "compliant oral rendering of the text" (Page, 1977, p. 3).

Each of these conceptualizations of reading comprehension omits the creative, affective, idiographic, and ontogenic aspects of the construct. Gibson, addressing another problem and another audience, succinctly summarizes a portion of the view presented here: "Reading is a cognitive process. No S-R theory is going to help us. It starts with perception . . . and it ends up as a conceptual process" (1972, p. 3).

But perhaps it is the plethora of models, theories, and suggested explanations from which we are asked to choose that provides for the general confusion. A small sampling of these offerings demonstrates

their variety. Some semanticists equate comprehension with “understanding” in the context of an information-storage-retrieval-reaction device (Scriven, 1972, p. 32). Other investigators recommend exhaustive componential analysis (as per the extensive kinship terminology research of anthropology) as a tool for comprehending comprehension. By far the largest and most influential school however, presumably extending and adapting some aspects of sub-strata factor “theory” (Holmes, 1953), employs a reductionistic strategy in developing a multitude of comprehension “sub-skills,” the implication being that transference can and will occur to other contexts.

No doubt each of these paradigms offers something to the teacher or theorist who wishes to utilize or put forth a clear-cut definition of reading comprehension. Each offers, however, a definition based less on empirically verifiable data and well-organized cognitive principles, than on a functionalistic or structuralistic perspective.

How then are we to define reading comprehension so that it is of legitimate use to the teacher, researcher, and theorist? The suggestion offered here is that we attempt a synthesis of cognitive theory with the significant results of recent idiographic and nomothetic research in comprehension. The result is proposed as the rational — some might say rationalistic — beginning of a more cognitive definition of reading comprehension.

The goal of this brief paper, then, is a tentative definition of reading comprehension which invites response and criticism. Its purpose is to engender examination among model-builders and practitioners in the field of reading. It is certainly not offered as the right answer; at this stage it is doubtful that the right questions are being asked. Rather it is offered as a plea for the examination, empirically and theoretically, of reading as a molar cognitive process bound by linguistic convention.

The Ambiguity of Comprehension

In the statement by Gibson quoted above, three terms would seem to serve as useful components of a foundation for a more useful definition of reading comprehension: “cognitive,” “conceptual,” and “process.”

Reading comprehension is cognitive in its most elemental sense; i.e., it is internal, rationalistic, and covert. It is conceptual in that it does not readily lend itself to reduction into elements or bits of information. Although it is possible to view comprehension from the perspective of reducing uncertainty, it may be more profitable to analyze the process in holistic terms (Smith, 1978). Comprehension is a “process” — rather than a product — which is not easily quantified, which is ultimately not observable, and which begets other processes.

A useful benchmark in establishing a definition of reading comprehension may be found in Page’s (1978) differentiation between pseudo-reading and meaningful reading. In assessing a variety of oral reading altercues, Page describes pseudo-reading in terms of a “spoken analog that replicates the printed language.” This variety of reading,

begetting very little in the way of internalization of cognitive conceptualization, is vividly contrasted to “the reconstruction of the message” which occurs during meaningful reading; e.g., comprehension (p. 3).

Other writers, too, have implicitly noted the ambiguity surrounding the variety of references to the vague concept of “comprehension.” Carroll, for example, notes that “the commonly accepted definition of comprehension is that it is a process of apprehending the ‘meaning’ of something—the ‘meaning’ of a word, phrase or idiom in a sentence, or longer discourse” (1972, p. 10).

It is possible to infer from this statement a certain degree of dissatisfaction with the “commonly accepted definition.” As a professional group, reading educators tend to be decidedly ambiguous concerning comprehension, what Goodman has called the “only objective” of all our instruction, research, and theory (1972, p. 2).

The comment by Carroll noted above implies the vague nature of “meaning” as a distinct property of language and cognition. A multitude of scholars has been unable to resolve the meaning of meaning, ranging from Ogden and Richards (1923) through Quine (1964) and Putnam (1975). Even a superficial discussion of meaning requires the integration of such abstruse but essential considerations as the language-Weltanschauung hypothesis of Sapir and Whorf (1956), the semantic generalizations of Luria and Vinogradov (1959), and the case relations of Fillmore (1968) and Gruber (1965). Each of these somewhat recondite concepts suggests a wider distance between the theoretical and practical levels of application.

Perhaps, however, it is possible to define, at least operationally, the process of reading comprehension within cognitive parameters without the exhausting necessity of defining the meaning of meaning.

The Disambiguity of Comprehension

The tentative definition of reading comprehension proposed here takes as its source contemporary work in psycholinguistics and cognitive psychology. The suggested operational definition takes its unifying principle from the Piagetian notion that “no form of knowledge, not even perception, constitutes a simple copy of reality, because it always includes a process of assimilation to previous cognitive structures” (Piaget, 1971, p. 4).

This statement is, of course, central to the concept of the cognitive schema. The linguistic interiorization of cognitive content is thus assimilated by schemata which may be said to be pre-conceptual. Depending upon one’s perspective, it is possible to see in this concept the confrontation between conventional logical positivism and genetic epistemology.

However, if these points are considered in the light of recent psycholinguistic research in reading (Goodman and Burke, 1973; Page, 1976; Thorndyke, 1977), a synthesis of the conclusions may suggest the following definition: reading comprehension is the integration of

idiomatic or “chunked” structures are provided for, as well as longer forms of narrative and expository discourse.

Further, this definition of reading comprehension would seem to be consistent with the empirical results of miscue analysis research and with the “incidentally perceptual” information processing description suggested by Smith (1973). The proposed definition of reading comprehension would also appear to account for the pseudo-reading described above. In this context, pseudo-reading would appear to be essentially the grapho-phonemic aspect of sub-vocalization. In cognitive terms, it would serve merely as perceptual interpretation through the intermediary of functional and/or spatial schemata.

The overriding concern is that the fundamental interpretive base is semantic in nature. While the other primary language systems contribute to assimilation, language (hence reading) is essentially meaning-centered. Syntactic and grapho-phonemic considerations are important, but ancillary.

Part of the definition of reading comprehension postulated here is analogous to some components of the original analysis-by-synthesis model proposed by Bergson (1911) and refined by Neisser (1967). But the definition discussed here is essentially eclectic.

Empirical validation of a definition such as the one proposed here is, of course, quite difficult to obtain when so much of the validation depends upon the researcher’s perspective in interpretation. Some recent and on-going studies (Page, 1977; Carey, 1978) would, however, appear to lend some validity to this definition when interpreted in the light of contemporary cognitive theory. Also, a long-held truism from the natural sciences is still pertinent: absence of evidence is not evidence of absence.

As noted earlier, there is probably no single definition or macro-definition of reading comprehension available to us, just as there is not, as yet, a representative model. This brief paper has been an attempt, however, to engender discussion on the topic, the ultimate goal being a clarification of the entire concept.

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