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READING RESEARCH: SOME COMMENTS

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"What is the most difficult of all?
That which seems easiest, to see
with one's eyes what is lying
before them."

Goethe

As early as the beginning of this century men such as Dearborn, Javal, and Judd were asking questions concerning the epistemology of reading. Huey described these efforts when he noted:

And so to completely analyze what we do when we read would almost be the acme of a psychologist's achievements, for it would describe very many of the most intricate workings of the human mind, as well as to unravel the tangled story of the most remarkable specific performance that civilization has learned in all its history (Huey, 1908, page 6).

Huey's challenge to reading research remains as relevant today as when he wrote it. His statement stands despite thousands of studies which have been completed on various aspects of reading using almost every conceivable avenue of investigation, whether associated with the reading process of the individual or the learning environment in which the reading instruction takes place. In fact, were one a cynic, it might be easy to believe that the majority of what is commonly referred to as reading research has in reality been nothing more than exercises developed to implement increasingly sophisticated research designs or, in the terminology of Farr and Weintraub (1974-1975), "methodological incarceration." They further note

...many of the (reading) studies published each year are both myopic and narrow in scope and fail to address themselves to the most important issues and concerns related to understanding the reading process--the teaching of reading, and the field of reading in general (p. 500).

Why is it, then, that after almost a century of concentrated effort in reading research by some of the most able persons in education, there still remains a seemingly impenetrable barrier beyond which we currently know so little? Perhaps Kolers (1968) summarized this dilemma best when he said, "Whether an element of a system can study itself successfully, whether man can describe his own mind in an intellectually useful way, is uncertain and complex...(p. xiii)"

In attempting to deal with this question it might be helpful to consider certain philosophical matters encountered in physics related to studies of cosmological determination of ultimate answers about the physical world. What with the development of atomic energy, space travel, and a multitude of other advances in almost every aspect of our daily lives, it seems reasonable to assume science, given adequate time and resources, would eventually understand all physical phenomena. Yet as surprising and as contradictory as it may seem, scientific research has within recent years reached what now may be frontiers of knowledge beyond which investigators have been unable to go.

How much can man really know about the universe? In the twentieth century, science has come up against fundamental limits. The most famous of these, the uncertainty principle in quantum theory, states that we cannot know precisely both the position and momentum of a particle at the same time. This is because the very act of observing interferes with the particle, causing an unpredictable change in its state.

(Overbye, 1977, p. 89)

Thus, because of the nature of the equipment needed to observe the minute world of the atom and ultimately because of the inherent limitations associated with the human senses, the scientist unwittingly becomes a part of and therefore significantly changes the problem being studied.

This concept of not being able to explain or to describe

the primary forces in the physical world, such as electricity, magnetism, and gravitation runs counter to much of the history of Western scientific thought. The discoveries of Galileo and Newton so aptly described the reality of what was encountered in most laboratory experimentation that a mechanical universe based solely on the interaction between elements within the same system "...and whose behavior was totally determinate as well as in principle independent of its being observed or known" (Bohn, 1977, p. 559) became a readily accepted model of the natural world.

It has only been in this century, though, that scientists have begun to seriously doubt their efforts in determining nature's ultimate secrets. As noted by Barnett (1974)

For all the promise of future revelations it is possible that certain terminal boundaries have already been reached in man's struggle to understand the manifold of nature in which he finds himself. In his descent into the microcosm he has encountered indeterminacy, duality, paradox--barriers that seem to admonish him he cannot pry to inquisitively into the heart of things without altering and vitiating the processes he seeks to observe.
(p. 115)

While it may be readily accepted that observation of the atom can easily be influenced by the measuring devices and physical senses of the investigating scientist, we are only now beginning to realize that disciplines besides physical sciences may be facing the same problem. A parallel might be drawn between the current situation in science and the problems noted earlier in relation to reading research. Just as science has increasingly detailed the many individual aspects of physical phenomena through laboratory experimentation, much of the research in reading, following a correspondent paradigm, has attempted to divide the complex process of reading into static skills and to measure these isolated elements in a setting which ignored the interplay of numerous closely related variables. As noted by Wolf and Tymitz (1976-77), "Whereas the reading field deserves holistic inquiry strategies, it is best characterized by focus oriented non-integrative research" (p. 6). In such a research plan, which attempts to separate and measure increasingly more specific aspects of the reading process, the influence of the observer on the results of experimentation could become a crucial question in much the same manner as the scientist

probing the universe of the atom has become a crucial factor in the physical sciences. In fact, does the use of a non-integrative research model serve only to accelerate the effect of the observer as division of the reading process becomes increasingly finer? Perhaps the problem of reading research in its quest for answers through dissecting the reading process into its component parts is that inadvertently these investigative procedures themselves have increased the effect of the physical and societal limitations and bias of the human researcher to a degree that we much sooner reach the ultimate barrier to knowledge beyond which we may not penetrate.

One possible answer may be forthcoming from promising new avenues of reading research planning such as ethnographic inquiry. Rather than treating the reading process as a static set of isolated skills, ethnographic research

involves sustained interaction between researcher and subjects within culture, environment, or milieu under investigation. It is comprised of a congerly of techniques generally classifiable as 1) interviews, both formal and informal, retrospective and introspective; 2) observation, both structured and unstructured; and 3) a range of obtrusive and unobtrusive measures. The ultimate aim of these procedures would be to provide accurate, detailed analysis of educational settings where reading occurs. Such analysis would scrutinize the full range of activities involving reading instruction, as well as all other activities comprising the totality of classroom life. It would not only account for children and teacher abilities, backgrounds, attitudes, expectations, and personality characteristics; but it would also study and document the many interactions inherent in the teaching and learning process within that environment. (Wolf and Tymitz, 1976-1977, p. 8.)

While it might be argued that observational bias would still be present, the fact remains that the ethnographic paradigm views reading in its totality and thus hopefully in a more accurate perspective.

Even with this most promising approach, reading research, as is true of all scientific inquiry, may in the end face the ultimate unknown. For as Barnett (1974) so eloquently noted,

In the evolution of scientific thought, one fact has become impressively clear; there is no mystery of the physical world which does not point to a mystery beyond itself. All highroads of the intellect, all byways of theory and conjecture lead ultimately to an abyss that human ingenuity can never span. For man is enchained by the very condition of his being, his finiteness and involvement in nature. The farther he extends his horizons the more vividly he recognizes the fact that, as the physicist Niels Bohr puts it, "we are both spectators and actors in the great drama of existence." Man is thus his own greatest mystery. He does not understand the vast veiled universe into which he has been cast for the reason that he does not understand himself. He comprehends but little of his organic processes and even less of his unique capacity to perceive the world about him, to reason and to dream. Least of all does he understand his noblest and most mysterious faculty; the ability to transcend himself and perceive himself in the act of perception.

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