Metaphors in Second Language Reading Theories

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The concept of reading as such is abstract in the sense that reading a text is not a physical experience, so metaphors are used which describe abstract concepts in terms of other more concrete concepts. I will attempt to show that the conceptualization of reading is largely dependent on metaphors by investigating how researchers on reading use metaphors to develop their theories on reading. In Section I, after examining the traditional model on reading and the metaphor which is employed there, the subjective reading model will be discussed. Section II will deal with the interactive reading model and its metaphors. By going through this procedure, the close relation between reading theories and metaphors will be revealed.

I

The traditional view on reading was that the reader extracts meaning from text encoded in it by linguistic rules, as the following comment shows:

> It is simply assumed that knowledge can be expressed in printed language, and that a skilled reader can acquire knowledge from reading. On this view, each word, each well-formed sentence, and every satisfactory text passage "has" a meaning. The meaning is conceived to be "in" the language, to have a status independent from the speaker and hearer, or author and reader. Also, a failure to comprehend a nondefective communication can in principle always be traced to a language-specific deficit. This is a theorem which follows directly from the axioms that

knowledge is expressible in language and, symmetrically, that the skilled reader can decode the language into knowledge. Therefore, it is assumed, difficulties in comprehension can be traced to failures of skill. Some of the words may not be in the reader's vocabulary. A rule of grammar may have been misapplied. An anaphoric reference may have been improperly coordinated, and so on.[1]

This view is prevalent in thinking about reading and listening based on the metaphor "*LANGUAGE IS A CONTAINER*." This metaphor entails that

(1) the writer inserts the meaning into words using linguistic codes,
(2) language works as a container of the writer's meaning,

and

(3) the reader takes the meaning out of the language using the same codes that the writer has used.[2]

As Anderson *et al.* point out, the traditional reading model downplays the reader's role, depriving him of the ability to interpret a text. Employing the "*LANGUAGE IS A CONTAINER*" metaphor will reduce the reader's task to simply extracting the writer's meaning from the text, just as we would take an object out of a box. This metaphor will induce the teacher to stress the skill of "opening" the language since language is viewed as a box and codes are regarded as the keys to opening it.

The conceptualization of reading based on the "*LANGUAGE IS A CONTAINER*" metaphor, however, does not hold true since reading is not, in fact, passive but active involvement on the part of the reader. By comparing

(4) The cop raised his hand and stopped the car,

with

    (5) Superman stopped the car,

we will notice that the reader's interpretation of (4) is quite different from that of (5). (4) will be interpreted as describing the situation in which the cop raised his hand, the driver put his foot on the brake, and the car came to a halt. (5), on the other hand, is interpreted to mean that Superman physically stopped the car which was out of control.[3] The point here is that, in reading (4) and (5), what the reader is doing is not extracting the meaning from the sentences but supplying various kinds of information which is not given linguistically at the surface level, but comes from the reader's knowledge of the topic concerned.

The same holds true with text reading. We read a text with our extra-linguistic knowledge. Anderson *et al.* report the results of their experiments showing that 30 physical education students and 30 music students were inclined to give only one interpretation to a passage which was open to two interpretations. In these results, they observe that the students' academic fields affected their interpretations. The physical education students, for example, are asked to read the following passage:

> Rocky slowly got up from the mat, planning his escape. He hesitated a moment and thought. Things were not going well. What bothered him most was being held, especially since the charge against him had been weak. He considered his present situation. The lock that held him was strong but he thought he could break it. He knew, however, that his timing would have to be perfect. Rocky was aware that it was because of his early roughness that he had been penalized so severely — much too severely from his point of view. The situation was becoming frustrating; the pressure had been grinding on him for too long. He was being ridden unmercifully. Rocky was getting angry now.

He felt he was ready to make his move. He knew that his success or failure would depend on what he did in the next few seconds.[4]

While this passage can be read not only as a wrestling match but also as a prison escape, most physical education students reported only the wrestling interpretation.

This result is accounted for by schema theory. Schema is the structure of prior knowledge which is composed of constituents represented as slots. The reader is considered to comprehend a text using a schema in the following way:

> ..., it is when the reader has constructed a correspondence between relevant schemata and the givens in a message that s/he has the sense that the message has been comprehended. When the slots are filled with particular cases a schema is said to be "instantiated." The instantiated cases will be the ones required for the representation as a whole to make sense. In other words, comprehension of a message entails filling the slots in the appropriate schemata in such a way as to jointly satisfy the constraints of the message and the schemata.[5]

The idea of filling slots with particular cases is to regard text reading as *"READING IS CLASSIFYING ITEMS INTO APPROPRIATE BOXES."* We classify what we have received into boxes with indexes on them. And each person is supposed to have his own system for categorizing materials. This concept implies that comprehension of an identical text is relevant to each person's world knowledge on a given topic.

Another point which deserves notice is the concept of "link," expressed as "a correspondence between relevant schema and the givens in a message." In filling a slot with a given input from the text, there must be some relationship or correspondence between a

given item and a slot. Schema theory expects that new information is to be linked to the existing slots for input information to be meaningful. This view is expressed by another researcher:

> ... we comprehend something only when we can relate it to something we already know — only when we can relate the new experience to an existing knowledge structure.[6]

The concept of link entails that we can understand a new idea only when we have already had corresponding knowledge or schema about it. It follows, therefore, that we cannnot know more than what we have already learned, resulting from the concept of "link."

The reader fills the empty slots even if information is not available in a given text. Anderson *et al.* observe that

> the slots in the schemata from which an individual is trying to build an interpretation of a message "beg" to be filled. They must be filled, even when the message contains no direct information, otherwise comprehension will fail.[7]

The reading model based on schema theory described by Anderson *et al.* may induce us to assume that the reader creates his own interpretation since filling slots with items seem to require him to seek the correspondences between the slots and the givens in the text. But the fact is that the reader's schema determines his interpretation, as Anderson *et al.* observe when they state "dominant high-level schemata are often imposed on text ...."[8] to account for how the reader's knowledge works in reading text. It is worth pointing out that this raises the image that some object at a higher position physically presses itself onto another object which is placed at a lower position.

Another metaphor employed by Anderson *et al.* is that *"READING IS SEEING ."* They maintain as follows:

> The third and final claim is that high-level schemata tune people to see messages in certain ways .... The word "see" is intended in an ordinary language sense. We mean, simply, that at a very early stage in processing, high-level schemata can cause a person to give one interpretation to a passage without even considering other possible interpretations.[9]

This metaphor also supports the idea that reading is dominated by high-level schema. The fact that the reader's role is reduced is suggested by the use of the verb "see" which means, in contrast with "look at," passive optical perception. We can recognize how this metaphor conceptualizes reading by comparing "seeing a drawing" with "reading a text." The reader corresponds to the viewer, a text to a drawing and the reader's prior extra-linguistic knowledge or schema to his viewpoint. This metaphor supports the idea that "high-level schemata can influence a person to impose one framework on a message, without deliberately or even subconsciously considering others, ..."[10] While Figure 1 is open to two images, i.e., a bridge and an arch, it is impossible to see it as a bridge and an arch at the same time, just as one cannot interpret the passage discussed above as a prison escape and a wrestling match at the same time. In addition, a person who has never seen an arch cannot see Figure 1 as an arch, which means that a person who does not know anything about wrestling cannot read the passage as describing a wrestling match.

Figure 1

Anderson *et al.* conclude, therefore, that "... people from different backgrounds who, therefore, have different systems of knowledge and belief about the world, would 'see' the same text passages in different ways."[11] Just as one's viewpoint affects how he sees a given drawing, one's prior knowledge influences his interpretation of a given text.

The metaphors employed by Anderson *et al.* are used to stress the subjective nature of reading, showing how high-level schema determines text meaning. These metaphors put the subjective aspect of reading to the fore in that they help to emphasize the idea that text interpretation is relative to the reader's prior extra-linguistic knowledge.

II

In reading such a passage as

> (6) Mary heard the ice cream man coming down the street. She remembered her birthday money and rushed into the house,

the reader would guess that Mary ran into her house to get some money to buy some ice cream. But when the following phrase is

> (7) and she locked the door,

he would recognize that his original interpretation needs change and assume that Mary had some reason to be afraid of the ice-cream vender.[12] And he goes on to read the passage with this new expectation. Reading is, therefore, a process of building expectation

and refining it constantly, contrary to the subjective reading theory that high-level schema controls text meaning.

The interpretation is achieved by the interactive process between the reader's expectation and new data from the text. In order to describe this process, various metaphors are used. Goodman describes reading as:

> Reading is a selective process. It involves partial use of available minimal language cues selected from perceptual input on the basis of the reader's expectation. As this partial information is processed, tentative decisions are made to be confirmed, rejected or refined as reading progresses.[13]

This process has some affinity with building a scientific theory in the sense that text meaning which is formed on the basis of the reader's expectation is being confirmed and reformed by new information, just as a scientific theory undergoes constant revision by new data.

Rumelhart accounts for the process of text comprehension as:

> The process of comprehension is very much like the process of constructing a theory, testing it against the data currently available, and as more data become available, specifying the theory further — that is, refining the default values .... If the account becomes sufficiently strained, it is given up and a new one constructed, or, alternatively, if a new theory presents itself that obviously gives a more cogent account, the old one can be dropped and the new one accepted.[14]

Theory construction is seen as a process which starts with data collection to build a tentative assumption, which is to be tested against further data. In this process, a theory may be reformed or given up resulting in constructing a better theory. This is a process to get closer to the truth step by step which is seen as a goal for

researchers.

It deserves notice that the subjective comprehension approach provides a quite different story from that proposed by the interactive view:

> Driver and Easley (1969) and Driver (1973) found that people have a comparable difficulty in acquiring the conceptual frameworks of physics. They interrogated gifted high school physics students about the movement of balls, launched by a spring plunger, along a horizontal track. While students used the terminology of Newtonian mechanics, such as "force," "momentum," and "impulse," many of them "manifested the Aristotelian notion that constant force is required to produce constant motion." Driver and Easley (1969, p. 1) concluded "that the student ... has already developed many concepts from his experience with the physical world, which influence his understanding of the new evidence and arguments ...." Driver (1973, pp. 423-424) added that, "The belief system they use in school to pass examinations and satisfy the teacher ... may never be related to that which is used in everyday experience."[15]

This statement made by Anderson *et al.* indicates that a prior knowledge on physics will determine the meanings of the scientific terminology and that there is no room for new data to be used to reform or destroy a theory or expectation. Rather, the subjective view maintains that new data is interpreted in the framework of a specific theory. As Anderson *et al.* put it, "Apparent inconsistencies and counterexamples often are easily assimilated into the schemata a person holds dear."[16]

Goodman describes the notion of reading process as follows:

> The receptive process does start with the phonological or graphic display as input, and it does end with meaning as output, but the efficient language user takes the most direct route and touches the fewest bases necessary to get to his goal.[17]

The process of reading is described in terms of the metaphor *"READING IS TRAVELING"* which is expressed by "start," "end," "direct route," and "get to his goal." If the reader's interpretation is wrong, he is said to have deviated from the path:

> When readers produce responses which match our expectations we can only infer successful use of the reading process. When miscues are produced, however, comparing the mismatches between expectation and observation can illuminate where the readers have deviated and what factors of input and process may have been involved.[18]

When a reader fails to read correctly, he is said to have deviated from the path. When we travel, we start from a certain point and progress along a path. Though we may sometimes get lost, we try to get to our destination. This conceptualization is applied to the reading process where a reader is finally supposed to reach the text meaning.[19]

In traveling, it is desirable to reach a goal as fast as possible with the least effort, taking the shortest route with the fewest deviations. In reading, the reader is encouraged to read as fast as possible with the least difficulty. This expectation will endorse the use of the reader's schema as a means to make the reading process effective and facile:

> Receptive language processes are cycles of *sampling, predicting, testing* and *confirming*. The language user relies on strategies which yield the most reliable prediction with the minimum use of the information available.[20]

This approach to reading will induce the instructor to provide the

students with background knowledge as "strategies" for reading a text. Background knowledge will, therefore, be considered to compensate for a lack of knowledge of linguistic rules which are also used as a means for reading, as James Coady maintains when he says " ..., greater background knowledge of a particular subject matter could compensate somewhat for a lack of syntactic control over the language."[21]   When text meaning is taken as a goal in *"READING IS TRAVELING,"* schema is considered to be a strategy for getting to the goal. This is in sharp contrast to the subjective reading theory where schema is considered to work to determine the reader's text interpretation.

I have attempted to show that reading is conceptualized in different ways by different reading researchers and that metaphors play a significant role in describing reading. In Section I, I introduced the subjective reading approach which is contrasted with the traditional reading theory. The metaphors used by the subjective approach imply that the reader's prior knowledge controls the interpretation of the text and that his expectation tends to resist being revised by new incoming data from the text. Section II introduced a reading theory which proposes the interactive process between incoming data and the reader's expectation. In this theory schema undergoes reformation rather than being unchangeable. This process is described by the *"READING IS TRAVELING"* metaphor.

I hope that this paper has shown at least partly that building a reading theory is largely dependent on metaphors and that metaphors make theories incompatible with each other. I assume, therefore, that the meanings of the terms used in reading theories,

such as "reader," "text," and so on, are determined relative to metaphors used in the theories.

NOTES

1 Richard C. Anderson *et al.*, "Frameworks for Comprehending Discourse," *American Educational Research Journal*, 14, No.4 (1977), 368.

2 cf. Michael J. Reddy, "The Conduit Metaphor — A Case of Frame Conflict in Our Language about Language," *Metaphor and Thought*, ed. Andrew Ortony (Cambridge: Cambridge University Press, 1979), p. 290.

3 David E. Rumelhart, "Some Problems with the Notion of Literal Meanings," *Metaphor and Thought*, ed. Andrew Ortony (Cambridge: Cambridge University Press, 1979), pp. 85-86.

4 Richard C. Anderson *et al.*, p. 372.

5 *Ibid.*, p. 369-70.

6 Patricia L. Carrell, "Some Issues in Studying the Role of Schemata, or Background Knowledge, in Second Language Comprehension," *Reading in a Foreign Language*, 1, No. 2 (1983), 82.

7 Richard C. Anderson *et al.*, p. 370.

8 *Ibid.*, p. 371.

9 *Ibid.*, p. 370.

10 *Ibid.*, p. 377.

11 *Ibid.*, p. 371.

12 cf. Patricia L. Carrell and Joan C. Eisterhold, "Schema Theory and ELS Reading Pedagogy," *Interactive Approaches to Second*

Language Reading, eds. Patricia L. Carrell, Joanne Devine, and David E. Eskey (Cambridge: Cambridge University Press, 1988), p. 78.

13 Goodman K. S. and C. Burke, "Reading: A Psycholinguistic Guessing Game," *Theoretical Models and Processes of Reading*, eds. H. Singer and R. B. Ruddell (Newark, Del.: International Reading Association, 1970), p. 260.

14 David E. Rumelhart, "Schemata : The Building Blocks of Cognition," *Theoretical Issues in Reading Comprehension*, eds. R. J. Spiro, B. C. Bruce, and W. F. Brewer (Hillsdale, N. J.: Erlbaum, 1980), p. 44.

15 Richard C. Anderson *et al.*, p. 379.

16 *Ibid.*, p. 378.

17 K. S. Goodman, "Psycholinguistic Universals in the Reading Process," *The Psychology of Second Language Learning*, eds. P. Pimsleur and T. Quinn (Cambridge: Cambridge University Press, 1971), p. 136.

18 K. S. Goodman, "The Reading Process," *Interactive Approaches to Second Language Reading*, eds. Patricia L. Carrell, Joanne Devine, and David E. Eskey (Cambridge: Cambridge University Press, 1988), p. 13.

19 The "traveling" metaphor holds true of scientific research since scientists try to "get to" a perfect theory by making continuous revisions of their hypothesis.

20 K. S. Goodman, "Psycholinguistic Universals in the Reading Process," p. 136.

21 James Coady, "A Psycholinguistic Model of the ESL Reader," *Reading in a Second Language*, eds. R. Mackay, B. Barkman, and

R. R. Jordan (Rowley, Mass.: Newbury House, 1979), p. 11.