

SCHEMA THEORY AND THE TEACHING
OF LITERATURE

CENTRE FOR NEWFOUNDLAND STUDIES

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SCHEMA THEORY AND THE TEACHING OF LITERATURE

by



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Be worthy your work if you love it;
The king should be fit for the crown;
Stand high as your art, or above it,
And make us look up and not down.

Ella Wheeler Wilcox, "The Actor",
Poems of Pleasure & Passion, 1908

Abstract

In view of the fact that literature does maintain an important position in the school curriculum, we must be concerned with how people read and interpret literature. We must accept that the teaching of reading is vital to the process of interpreting literary texts. Therefore, it is the purpose of this thesis to propose that a schema-theoretical view of reading is a viable approach to the teaching of comprehension. It is the further purpose of this thesis to examine such a process-oriented approach in which the notion of the text and the reader as partners in the reading process is of central concern.

Believers in reader-response criticism posit that when readers encounter texts they use previously acquired background knowledge together with the author's cues, to create meaning. Reading is an interactive process in which we must consider both text and reader. To this end, there will be supplied an examination of how these two interact in reading comprehension - an exploration of specific aspects of reader response.

Overall, a schema-theoretical view of the composing process requires us to modify many of our traditional views of reading comprehension. Some implications of such modifications are presented and some practical suggestions for improving the teaching of literature are provided. Thus the major purpose of this work is to facilitate reading comprehension.

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CHAPTER I

THE NATURE OF LITERATURE

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The Question of Definition

In pursuing any research in the field of the interpreting of literature, one must first address that "grand old question" which has challenged writers seemingly forever. What is literature? It is true that from the time of Aristotle man has tried to reduce the discipline of literature to terms of one tidy sentence. Many of these definitions represent the appeal of a particular time, place, and need. On the other hand, the word has frequently been used to refer to anything in print, without qualifications of any sort. The Oxford English Dictionary (1933) includes the following: "the body of writings produced in a particular country or period, or in the world in general". This definition is, of course, quite general. By its very nature it does not speak to all of our concerns regarding literature. Wellek and Warren (1977) summarize the situation quite succinctly when they write:

The first problem to confront us is, obviously, the subject matter of literary scholarship. What is literature? What is not literature? What is the nature of literature? Simple as such questions sound, they are rarely answered clearly. (p. 20)

Even given the evidence of centuries of thought, there has never been offered any simple, precise, clear,

and lasting definition of literature. Indeed the lack of a formalized position - an all-encompassing statement - has been the one obvious, salient point made apparent in recent writings. Hernadi (1978) cites various prominent researchers such as E.D. Hirsch, Jr. (1978), Davenport (1978), Altieri (1978), and Peckham (1978) who corroborate this notion that there have been many conflicting opinions regarding the nature of literature. These same writers, however, posit that one does not indeed need a formal definition of the word. For these people, the exercise in definition is unnecessary, since the term literature lends itself largely to common sense understanding. Consequently, to explore the notion of defining literature is largely futile as we succeed only in narrowing our responses to literature. Indeed, any definition we might propose would quite probably eventually be noted for its instability.

This lack of a single comprehensive definition need not worry us unduly. Altieri (1978) explains that there really is no need for a formal definition of literature, simply because though we do not as yet have such a statement, we obviously can enjoy literary works and react to them intelligently.

The Need to Study Literature

Accepting the notion that the question of definition of the discipline is elusive but ongoing, one may be better advised to explore the realm of literature in terms of worthwhileness. Why study literature in the first place? What do literary works offer students? Why teach literature in the schools? These questions too, have been addressed repeatedly in both aesthetic and practical terms. Many writers assume that literary works do have value and that this is actually self-evident (e.g., Woodberry, 1969; Margolies, 1969; McMaster, 1977; McFadden, 1978). For these and numerous other researchers the world of literature is an exciting realm of possibility. Indeed, very few people would argue that literary works are valueless. Rather, one sees that the worth of literature is inherent in the works, that literature, along with being the foremost of the humanities is something of continual importance in man's life. As McMaster (1977) suggests, "Literature is a splendid laboratory" (p. 9).

Literature does maintain an important position in the school curriculum. All too often, writers have espoused traditional roles for literature in lofty and high sounding phrases. These leave us with vague and abstract generalities of the aesthetic pleasure in reading. On the other hand, literature has too often been regarded in purely functional terms. This leaves us short of any

aesthetic satisfactions. / Thus we face a dilemma. As Woodberry (1969) informs us, "Excess of instruction leads to one's being bored; excess of pleasure leads to frivolity" (p. 172).

So what does literature offer students beyond the traditional aims of instructing and entertaining? McMaster (1977) considers that "the benefits of literary culture are not obscure: they are intellectual, moral and aesthetic" (p. 4). This confirms the hypothesis that the value of literary works becomes three-dimensional: didactic, aesthetic, and heuristic. For the well-rounded student, literature should convey all of these notions. At this juncture it may be pertinent to examine briefly each of these aspects.

Didacticism has been a major part of literature for quite a long time, probably since the inception of the subject. John Rowe Townsend (1980) notes that "the urge to instruct the young is deeply built into human nature" (p. 56). Much of the literature of earlier centuries is quite didactic and moralistic in its intent and purpose. It aims to teach lessons, to moralize, to categorize how life should be lived. This has been demonstrated by authors such as Peacock (1972), Montgomery (1979), and Parr (1982) who see that literature both expresses moral doctrine and makes it believable. Thus it enables students to consider difficult moral problems that they may not have been aware of or indeed may have chosen to

ignore. The historical background of this didacticism stems from the Victorian and Edwardian view of literature. During these times, literature was seen solely "as an instrument of knowledge and wisdom, with the function of edification" (Peacock, 1972, p. 24).

This aim to teach is still very much a presence in literature today. The difference is that other considerations have surfaced, pushing the intent to edify somewhat to the background. In general, society no longer allows such conventional moral didacticism and narrow Victorian morality. Peacock (1972) suggests that "what we are really faced with is not disappearance, but mutation of the moral factor in assessing the significance of literature" (pp. 33, 34).

The aesthetic value of literature is not to be denied. Rosenheim (1980) informs us that "the primacy of pleasure as an end in reading is now quite widely accepted" (p. 40). The very nature of literature provides a forum for enjoyment. Who can dispute the power of words to move us, to arouse deep emotion, to engender fear, joy, passion, commitment, anger, and contentment? Discussion of the aesthetic appeal of literature is almost redundant in the sense that one has only to read a good book to realize its potential for entertainment and pleasure.

Enjoyment is an integral part of reading. Many take this for granted when they speak of the value of literature. Yet various researchers attest to the truth

of the notion that literature does yield pleasure to the reader, that literature does engender sensation and emotion, that literature does perform as an aesthetic object, capable of arousing aesthetic experience (e.g., Woodberry, 1969; Wellek and Warren, 1977).

At one time the pleasure of literature was minimal, if not non-existent, as emphasis was placed on "knowledge and virtue" (McMaster, 1977, p. 16). Then the merits of the aesthetic appeal of literature became the central focus. To reiterate, however, these two traditional functions - to instruct and to entertain - are worthy features of literary works but they do not cover the entire spectrum of literary value.

We come to the third dimension, which concerns the heuristic worth of literature. This area is of vital concern to educators today. It is here that we address the notion of literature for life values - we see that we read literature for where it will lead us, for its meaning in life. Wimsatt (1976) suggests that literature deals with real life, with promoting values for living.

The notion that literature deals in real-life truths is of great concern to many writers in the field. Indeed, in recent times, researchers in reading theory have taken great care to discuss this aspect of literature - to consider the presence of human truths as a vital component of any acceptable literary work. Some of these include Woodberry (1969), McMaster (1977), Taylor (1981), Parr

(1982), and Beach and Appleman (1984) who suggest that a work of literature is a direct presentation of selected experiences which enable us to recognize truths about our existence. This is done through involving us in the problems of being human and directing our responses to these difficulties. Literature deals with life, real human situations, complex human dramas, and responsible human responses. Consequently, students see the opportunity for mature, intelligent, moral choice in their own lives. As Parr (1982) puts it, "Literature gives life to the problems of being human" (p. 19).

We assume that in order for a piece of literature to be worthwhile it must contain some kind of message which will involve the reader in developing or acquiring values and meaning in his own life. As Beach and Appleman (1984) clearly state: "Literary texts often remind us of our own humanity" (p. 129), in a world where human events are often reduced to impersonal, scientific, technological reports. Literature allows us to confront such matters as consciousness, freedom, and choice.

Readers learn to develop insights about their own lives. This is accomplished through discovering and sharing in another person's ideas or model of the world. From these representations we learn to recognize statements about the world and people's responses to it. We come to see something about the world. We come to see

something about how we think and about how others think.

This is confirmed by Woodberry (1969) who claims that:

Literature is a key to one's own heart; it is also a key to the lives of others; there are other ways of learning one's own nature and human nature in general, but outside of direct experience and observation literature is the principal means of obtaining knowledge of human life. (p. 172)

Through literature we are able to discover our own potential. This is done via the representations of other people's situations and scenarios (McMaster, 1977). As we study literature we expand our own unique and personal lives by becoming critically aware of the great variety of human responses available to us.

Thus the main role of the literary text is somehow to bridge the gap between the experiences of the reader and those of the writer - to put the reader into touch with the author's model of how things are. In this way, writing can shed light on values, commitments, and convictions of society in general and help in the formation of a reader's own beliefs. Literature "bears witness to" or illuminates man's capacity to hold on to true ideals for living, to hold on to the human goals we must never forget. Hence literature should discourage moral apathy, should make students aware of the larger community, and should encourage empathy between the members of that community in exploring life's dilemmas.

Parr (1982) summarizes beautifully the heuristic value in literary works when she writes:

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I hope that by exploring the power of values and the complexities of moral choice within the literature they read, students will be better able to recognize and understand the possibilities for responsible action and self-realization within their own lives. I also hope that by seeing themselves as part of a rich, ongoing culture they will decide that moral choice is not only desirable but also possible within their own worlds. (p. 19)

Suffice it to say that literature does inform and entertain but that literature also does promote values. In the end, literature should foster the growth of responsible human agents structuring their own lives while they share commitments within the human community.

From this it is obvious that we have to agree with Gibson and Hall (1969) who recognize a three-dimensional approach to reading. For them the purposes of reading are: "to inform and be informed; to modify behavior, including the development of social understanding; and to secure pleasure and satisfy curiosity" (p. 22). This, then, is why people are taught to read.

CHAPTER II
READER-RESPONSE CRITICISM

The Role of the Text

If literature is such a very important medium, and quite simply we do not doubt this, we necessarily must be concerned with how people respond to literature. As public school teachers we must be even more conscientious in attending to the notions of literary response. And as concerned teachers of English we cannot inflict literature on our children without some conception of the way in which the reading process works.

Perhaps the first step would be to take a critical look at the role of the text in reading. For quite a long time it was assumed that writing contained a hidden message which the reader should find. Indeed, this was the traditional stance of the literary critic and literary criticism in which the text held the one "right" answer. Meaning was assigned to a piece of writing and students were required to find this meaning. Literature was seen to consist of texts and students could not respond to the material on their own terms. Rather, their answers were supposed to correspond with those of the critic.

The consequence of this approach was that students were encouraged to practice reading, by this to perfect their skills in finding the proper answer in a text much

as one would master fractions or sentence diagramming or any other learned operation. Many students were "turned off" by literature and the unfortunate truth was that oftentimes literary works were perceived to have little or no value. As Harste and Mikulecky (1984) point out:

When literacy is viewed as a perfectible skill as opposed to a functional vehicle of thought that is part of a social context, many of the benefits of literacy are lost not only for the individual, but also for society. (p. 73)

Yet this has been a standard approach to the study of literary works. Because of it our schools may be producing generations of literary critics. Our students are not permitted to respond to literary works. They have learned to recite and to regurgitate fixed ideas. But what happens to those students who encounter reading problems, who have difficulties in finding these assigned meanings, who cannot readily come up with the "right" answer? Obviously, if the individual responses of individual readers reacting to the text do not match preconceived notions they are considered to be wrong, to be even bizarre. In the final analysis, readers are forced to become paraphrasers of content.

This approach is in direct contrast with the conclusions of recent writers. One of these, Sadow (1982), sees that one cannot read just what the text states; that indeed "the process of discourse comprehension is not simply a matter of grasping what is explicitly stated" (p. 521). Another researcher who

writes in support of this notion is Wixson (1983). She insists that comprehension of a text does not consist merely of reading the words therein but rather it must involve constructing a meaning between the information suggested by the text and that information provided by the comprehender's existing knowledge.

Where does the notion of textual objectivity - the text containing a message which the reader must find - leave those of us who recognize the great variation in interpretation among student responses? Where does such an approach leave theorists who account for the human agent in the reading process? Consider the words of Bruns (1982), who firmly believes that "meanings in literary criticism (as in daily life) need to be replenished not fixed" (p. 3).

Clearly, this so-called "New Criticism" - which cites the text as the only source of meaning and disregards the presence of a human agent constructing meaning - does not allow for the obvious fact that different students might well interpret the same piece of writing in differing ways, and, indeed, the same student perceives the same piece of literature differently at different times. Consequently, writers in recent years have firmly discarded such a view of literary study. Many agree with McGilchrist (1982), who argues that "the critic has nothing to add to the work of art. He offers the reader nothing but what is already there. The reader's

perceptions and understanding come from within him, and are his own" (p. 6V).

Although this approach, which ignores the interaction of text and reader, may well be continuing in our schools today, fortunately such a view of literature no longer appears to be the only one. Seung (1982) shares some thoughts on this issue. He notes that the central premise for the development of this "New Criticism" has been the notion of textual objectivity. But he warns that during the past decade, the champions of reader-response criticism have been mounting a rising critique against such a premise. Further to this, Seung's own postulate is that "every text is no more than a blank tablet unless and until it is interpreted in a proper context of signification" (p. 10).

The believers in reader-response criticism as a viable approach to the study of literary works do not suggest that the text is unimportant in the process of reading. Yet they strongly advocate that the text alone cannot be the sole source of authority. If this were the case, they posit, then what would account for the variability of interpretation by readers? Various writers do allow for the truth of this notion that readers differ in their interpretations of literary material (e.g., Holland, 1975; Tyler, 1978). Holland (1975) reminds us that from his own experience as a critic and teacher he knows that readers can diverge markedly in the

interpretations they assign to a text. And Tyler (1978) corroborates this statement when he writes that every text is an immanent structure for its own interpretation but depends upon the reader for a framework of interpretation in which the text is rendered reasonable by the actions of its agents - the readers. He goes on to say that "the constitution of the text as a whole then is perspectival and open - it has more than one interpretation, and necessarily so" (p. 378).

Indeed the concern for individual responses in reading has been with us for quite some time. The pertinent literature reveals the ideas of many researchers who speak to this notion. Included among these are Swabey (1961) and Goodman (1984) who see that the reader's insight is of prime importance in the act of reading. Because of this we react to material in differing ways. Goodman (1984) elaborates further when he tells us:

The answer is that the reader is constructing a text parallel and closely related to the published text. It becomes a different text for each reader. The reader's text involves inferences, references, and coreferences based on schemata that the reader brings to the text. And it is this reader's text which the reader comprehends and on which any reader's later account of what is read is based. (p. 97)

Thus the text is read by a reader; it exists and finds its being through that reader. This notion of the text and the reader as partners in the reading process is central to the reader-response criticism which is our concern in this paper. McFadden (1978) supports this

contention when he shows that the source of being in any literary work is twofold, in that it takes place in the creative consciousness of a reader and the physical foundation of the text. But he does not stop there. He goes on to present a third and fourth dimension where a text is intersubjectively available to a community of readers and finds its completeness in a schematic aspect where it requires filling out by readers.

Consequently we have the notion that the text is important - but important only insofar as it suggests information to the reader by way of its structure of knowledge. It is not a fixed object which contains identical meaning for all, as the champions of textual objectivity would have us believe. In point of fact, many recent writers such as Iser (1978), Scholes (1978), Holland (1975), and Tierney and Pearson (1983) take great pains to reject the concept of textual objectivity. These authors see that a work of literature does not offer us a detachable message, that meaning cannot be reduced to a 'thing' - since, of course, it is a word and not a thing. Further to this they see that the materials in a text simply provide ways for readers to respond, that the readers compose meaning when they encounter literary texts. As Tierney and Pearson (1983) suggest, "There is no meaning on the page until a reader decides there is" (p. 569).

We recognize that the text is merely the groundwork for interpretation. It is not made complete until the reader brings meaning to bear on the information existing in the text. Brown and Lyman (1978) show that the text is not a fixed object or entity, because "the interpretation itself becomes part of the symbol just as an interpretation of a poem becomes on the next reading, a part of what the poem says" (p. 47). Kintsch and Yarbrough (1982) speak to this notion as well when they propose the idea of the inadequacy of textual objectivity alone to ensure correct comprehension. They state: "It is clearly false to assume that comprehension is an ability that can be measured once and for all, if only we had the right test" (p. 834). This could be extended further and the assumption could be made that the nature of comprehension is such that it could never be measured concisely. Different readers bring different meanings to bear and consequently interpret a text differently. Literary response must therefore necessarily involve more than the text itself; the "right test" can thus never be.

It is obvious that in reader-response criticism there exists a clear relationship - an interaction - between text and reader. As human agents assembling meaning students must convert the text into meaning in their own lives. Various researchers have explored this relationship to some degree or other (e.g., Rivers, 1978; Krieger, 1978; McCanles, 1978). They propose ideas in

which texts are seen as disembodied language and the readers are the performers who re-enact these texts. Thus the works exist for us only because we experience them: We "treat" the texts. In this act of "treating" the text we may or may not consider the signals placed by the author in the text, when we respond to literature. However, in order to avoid a purely idiosyncratic interpretation, the reader has to consider the signals provided by the author. Indeed a basic premise of reader-response criticism is that there must be an interaction between text and reader.

In view of these notions, the reader is seen as the one who completes the text. Writing itself is not complete without the intervention of the reader. Indeed this premise is apparently true in general when people encounter information of any sort. Oatley (1978) takes the position that when people are confronted with material - and in this instance we may construe material as any literary text - they try to make sense of it and the likelihood is that people translate the material into their own representations or schemata of the world. Carrell (1983) further acknowledges that "the reader is viewed as being at least as important as the text, in which reading comprehension is taken to be the reader's construction of meaning from the text" (p. 200). Finally, as Storr (1969) puts it, "There has to be a lock within us which the key of the book can fit, and if it does not fit, the book is meaningless to us" (p. 98).

The Presence of the Reader

There is research to support our contention that the text is not a fixed entity subject to the interpretation merely of the literary critic. Ultimately, the reader is at least just as important as the text in a dialectical process of assembling meaning. For many theorists the reader has replaced the text as the central figure in the process of reading. At this point then it may be wise to consider how the presence of a reader can affect the meaning of a text.

We are quite sure that man does not operate in a vacuum. Instead, we believe that the human agent does play a significant role in structuring meaning. Not all researchers have supported this notion. One can consider the world of scientism, for example. As believers in reader response theory we must reject pure scientism. Wayne Booth (1974) sees the ideals of scientism as being dogmatic:

The goal of all thought and argument is to emulate the purity and objectivity and vigor of science, in order to protect oneself from the errors that passion and desire and metaphor and authority and all the logical fallacies lead us into. (p. 88)

This view is impossible, we accept, in interpreting literature. We cannot regard knowing in such a rigorously scientific manner. Rather, we must reject the purely "objective" interpretation of the text and attend to the notion that man is the agent responsible for meaning.

Accepting the concept that every man does assemble meaning in his own world, we assert the belief that by his very nature man is not an objective creature. As Poole (1972) tells us, objective argument is not only impossible but "what is accepted as true is accepted as true because of an already existing structure of belief in the individual, an existing structure of interest or fear". (p. 121).

The phenomenologists lead us even deeper into the exploring of this subjectively constituted world as the plausible alternative to rigorous objective knowing. Researchers such as Kelly (1955), L. Hudson (1975), Matson (1976), and T. Hudson (1982) see that life is biased in that human agents construct their own worlds. As early as 1955 Kelly was aware of this when he wrote:

Life is characterized, not merely by its abstractability along a time line, but more particularly by the capacity of the living thing to represent its environment. Especially is this true of man, who builds construction systems through which to view the real world. The construction systems are also real, though they may be biased in their representation. Thus, both nature and human nature are phenomenologically existent. (p. 43)

For these theorists the presence of the human actors - through their thoughts, beliefs, and values - is of prime importance in all human activities. Indeed the human actors perform an "intrinsic and irreducible role" (Matson, 1976, p. 6) in constructing meaning. From this we see that the reader is an agent structuring his world as he actively predicts, selects, and confirms. The

reader brings meaning to bear and constructs meaning from the text. Thus there is very clear evidence that the reader acts in the process of comprehending any text.

By its very nature, language (and literature) is an open system which goes beyond science to predicate existence or to bring into being in language. In view of this, one must further insist that in every case a person brings certain meaning to bear in any experience. Various researchers have attended to the notion of the personalizing creative nature of literature. These include Holland (1975) and Iser (1978). Holland (1975) tells us that "each act of reading is constructive. It makes something new, something human, something personal" (p. 122). Iser (1978) also supports the idea of self-actualization when he suggests that "the reader's communication with the text is a dynamic process of self-correction as he formulates signifieds which he must then continually modify" (p. 67). The views of these and other thinkers make the observer (at least in part) of prime importance in the act of observing - in our case in the act of responding to a text.

The concept of the personal emanation of the personal being may explain to some extent why individuals can react to the same situation (literary text) in different ways - can read the same poem and have differing responses. It is this notion which produces what McFadden (1978) speaks of as a community of readers who "will possess varying

abilities to respond aesthetically or 'fill out' a literary work of art of whatever quality" (p. 50). This belief is corroborated by Brown and Steinmann (1978) and Holland (1978), who suggest that, in discourse what one reader counts as literary, another reader may not. Hence it is clear that different people, when they look literarily, will look for different things which will express their own personalities.

In literature we have writers accounting for their ideas of how the world is by writing accounts of how things and events seem to them. In this way, their models are cast into language form and readers bring their own meanings to bear on this material. Therefore, also in literature, we have readers accounting for or constructing their own notions of what is there from their personalized perceptions. These identifications of the patterns are necessarily open-ended. They can be corroborated or refuted in the interaction continuing between text and reader.

Feibleman (1976) attests to the notion that man reacts to the world but that this reaction is open-ended. He suggests clearly:

Man reacts to the world in accordance with what he knows about the world, and in accordance with the reactions he makes, what he knows about the world also changes. New instruments make possible new observations, and new observations suggest still further modifications in the instruments. Thus philosophies are enlarged to include new information or exchanged for more efficient ones. (p. 112)

The process of reading is necessarily open-ended. Readers are seen as filling in gaps as they hypothesize and predict what will be on a particular page or indeed what will be in the next sentence (Cullinan and Harwood, 1983).

In view of these conclusions we must once again suggest that the book is constantly being assembled by the reader. The evidence to support this belief in recent times has been considerable (e.g., Holland, 1975; Krieger, 1978; Iser, 1978; Carrell, 1983; Brooks and Dansereau, 1983). It is clear that the reader must construct the text out of the sequential patterns given him, that a description of the reading process must bring to light the operations activated in the reader by the text, and that meaning is constructed out of the interaction between the material in the text and a reader's background knowledge. Thus the experience of the reader and the context of the situation interact to influence how a reader interprets and recalls new information. Essentially, in carrying out the instruction of the text, the reader assembles the meaning of the text. As Holland (1975) assures us, "The work finds its fulfillment, so to speak, when a reader gives it life by re-creating the work in his own mind" (p. 13).

Reading is an interactive process. We must consider the text. We must consider the reader. It is the purpose of this present inquiry to try to explain how these two interact in reading comprehension - to look at specific aspects of reader response.

CHAPTER III

A SCHEMA - THEORETICAL VIEW OF READING

Patterns and Patterning

The evidence presented thus far points not only towards the view that reading involves merely the reader's constructing of meaning. Rather, the reading process is seen as an interactive (or "transactive") process between text and reader. The response (or "interpretation") is based on both the expectations of the reader and the cues structured by the text. At this point it may be appropriate to consider briefly some aspects of such an interactive (transactive) process of reading.

Reading appears to proceed in two directions. It definitely does, not involve only the idiosyncratic interpretation of the reader. Likewise, one can rule out the belief that reading is entirely the consequence of textual objectivity. There is of necessity a clear relationship between the two. Both the presence and the depth of this relationship have been demonstrated firmly in the literature pertaining to the subject. One can begin with Holland (1978), who perceives of a literary transaction as proceeding in two directions: "from literant to text and from text to literant" (p. 15).

Other researchers and writers agree with this concept, although some see the process as interactive while others suggest that it is transactive in nature.

Included among these are E.D. Hirsch, Jr. (1976), Iser (1978), Carrell (1983), and Goodman (1984), who see that reading response involves a dialectic relationship between the interaction of the text and reader, hence that every act of interpretation involves two perspectives, that of the author and that of the interpreter. Carrell (1983) puts it simply: "Reading is an interactive process between the text and the reader" (p. 183), while Goodman (1984) allows that "reading involves a transaction between the published text and the reader" (p. 107). In any case, it is clear that reading involves both the cues contained in the text and the interpretation of the reader.

As we have seen previously, many researchers concur in the belief that in reading the human agent is an active participant in the comprehension process. In fact, these theorists demonstrate that during the reading process the comprehender constructs the text. One cannot stress too strongly the importance of the active role of the reader. Contrary to previously held notions in reading comprehension theory, the reader is not the passive recipient of information. Rather, he fulfills the text in light of earlier acquired knowledge and expectations of what is in the reading material. Holland (1975), and Tyler (1978) support this view when they see reading as the active recreation of the text based on the materials found in it. Thus meanings are seen as intersubjective accomplishments. Speakers and hearers negotiate, amend,

and reaffirm these accomplishments by communicating with one another. In keeping with this line of thinking, we can here identify the writer as the "speaker" in the act of communicating. Naturally, then, the reader is the "hearer". It follows that the reader recreates (in his own terms) the writer's perceptions of the world.

A text is seen as something to be completed by the reader. To repeat: it is not the sole source of authority reluctantly yielding up its message to those who can successfully recover this assigned meaning. What is actually true is that the text must be interpreted by the reader. As early as 1958 Ong expressed the following belief:

For a literary work to be what it really is, words must move in sequence, one after another in someone's consciousness. The work must be read or heard, recreated in terms of communication touching an existent person or persons over a stretch of time. (pp. 85, 86)

Other writers have added their thoughts to this view (e.g., McFadden, 1978; Ong, 1982; Goodman, 1984). These researchers see that in addition to the signs of the work itself and its potential, a person must carry out a particular fulfillment of that potential - a reading or concretization. Consequently a text is an object which must be appreciated and interpreted by its readers. Goodman (1984) provides a clear summary of this notion when he writes:

Most research is converging on the view that transactions between reader and text characteristics result in construction of

meaning. This view makes the role of the reader a highly active one. It makes what the reader brings to the text as important as the text itself in text comprehension. (pp. 96, 97)

The previous research, as cited, is simply pointing toward a schema - theoretical view of reading. Let us consider the nature of such a view of reading.

Robinson and Schatzberg (1984) show that "in the framework of schema theory, people are seen as actively seeking to organize ideas and information into orderly structures" (p. 235). This notion of organizing knowledge is essential in reader-response theory. As Adams and Collins (1977) suggest, for the first time the ideas of schema theory are powerful enough to explain the interactions involved in reading. What happens is that the words contained in the text evoke in the reader associated concepts, their past interrelationships, and their potential interrelationships. - It is the organization of the text which helps the reader to select among these conceptual complexes. Consequently, the goal of schema theory is "to specify the interface between the reader and the text - to specify how the reader's knowledge interacts and shapes the information on the page and to specify how that knowledge must be organized to support the interaction" (Adams and Collins, 1977, p. 4).

As people strive to organize their ideas and information into orderly structures, essentially they are forming patterns. Indeed, theories dealing with the notions of patterns and patterning are major concerns of

schema theory research. Kelly (1955) spoke quite clearly in attending to this aspect of man's knowing. He wrote:

Man looks at his world through transparent patterns or templates which he creates and then attempts to fit over the realities of which the world is composed. The fit is not always very good. Yet without such patterns the world appears to be such an undifferentiated homogeneity that man is unable to make any sense out of it. Even a poor fit is more helpful to him than nothing at all. (pp. 8, 9)

Thus for Kelly "experience is made up of the successive construing of events" (p. 73).

The concept of patterns and patterning (or "pattern formation") can be considered in light of the ongoing process of knowledge acquisition. The basic knowledge structures and the processing mechanisms of schema theory, indeed, are not unique to the reading process. Rather, these same knowledge structures and processes are assumed to underlie all cognitive processes. Consequently, schema theory provides a way of integrating one's understanding of text with one's understanding of the world in general (Adams and Collins, 1977).

It is clear that throughout our learning and development as intelligent knowledge-seeking human beings we constantly form, revise, and reform patterns of knowing. We see that our existence then is a result of this adaptive learning or knowing. Accordingly, we start off with a range of predictions and expectations which are brought about or diagrammed by the experience to which we have been subjected - in effect, we are cultural human

beings formed by bodies of knowledge we encounter through language as our essential medium of exposure to these conditions. Because of this cultural aspect, we, as language learners, acquire notions of how the world exists or patterns of how things are. We set up these representations based on the knowledge we have acquired through the experience we bring to an event plus the ways in which we have learnt to deal with things in our world. Essentially, when we encounter a new situation we already have preconceived notions of how to react or deal with the experience.

Various authors such as Kelly (1955), Monsarrat (1955), Feibleman (1976); and MacKay (1969) have discussed these ideas of pattern creation in our experiencing of the world. They see that patterns are ways of construing the world, that patterns enable man to chart a course of behavior, that patterns allow man to order knowledge, to fit it in as a belief among other beliefs. Humans form these patterns for action based on their experiences and observations as well as the recorded histories of events. Such acquired patterns or structures of belief make up a mental model of the world.

These previously acquired patterns are activated when we encounter new information. It follows that if our predictions and expectations serve to satisfy our ideas of how things exist in the new situation, then our patterns

are fulfilled. Our ways of knowing are seen as equivalent to the situation.

Yet these patterns do not always satisfy; the predictions and expectations are not always fulfilled. As Kelly (1955) says, these patterns are "tentatively tried on for size" (p. 9). They are made authentic by a process of selection, of acceptance, or rejection. Thus our readiness to match the pattern of events of perception by the pattern of our own internal or external reaction is a conditional readiness. The patterns must satisfy, must be consistent with other courses of behavior. If the patterns do not fulfill we must then do something to change our modes of representation to take in the new experience.

Consequently the preconceived patterns are subjected to further reconstrual. Kelly (1955) sees that these patterns or "constructs" "are used for predictions of things to come, and the world keeps rolling along and revealing these predictions to be either correct or misleading" (p. 14). The important point is that these are not fixed notions or patterns. All of our present interpretations are subject to the revision or replacement by alternative construction. Kelly (1955) summarizes quite succinctly:

The succession of events in the course of time continually subjects a person's construction system to a validation process. The constructions one places upon events are working hypotheses, which are about to be put to the test of experience. As one's anticipations or

hypotheses are successively revised in the light of the unfolding sequence of events, the construction system undergoes a progressive evolution. The person reconstrues. This is experience. The reconstruction of one's life is based upon just this kind of experience. (p. 72).

The universe is always open to reconstruction. This is validated by various researchers who see that man does reconstrue or add new patterns for knowing. He supplements his experience by forming new images or adding the experience of others to his own. Hence there is a gradual construction of a mental model of the external world (e.g., Monsarrat, 1955; MacKay, 1969).

To summarize, the individual has to modify or revise his perspective in light of new knowledge or patterns of knowing. He must consider other ways of dealing with what is there. This, then, is the whole basis for man as a constantly learning being. His pattern or model is forever being challenged and adapted in light of new knowledge, new situations, or new experiences. He must then find some other representation which restores order to his perceptions - which fulfills. This, in essence, is what keeps man learning. He has to refine his model of things. Basically, man is forced to adapt his schemata, to revise each schema - ideally, he becomes more and more sophisticated in this approach.

A 9

Definition of Terms in Schema Theory

Primarily we have a schema - theoretical view of all knowledge acquisition which necessarily includes reading and comprehension. In this view the writer constructs a text through transactions with the developing text and the meaning being expressed. During the process the text is transformed and so are the writer's schemata (ways of organizing knowledge). Likewise, the reader constructs a text through transactions with the published text and the reader's schemata are also transformed in the process (Goodman, 1984).

We see that the words schema and schemata are of central importance in the process being described. To understand more fully such an approach to reading we need to consider in detail exactly, what schemata are - how a schema is defined in a composing model of reading.

The Oxford English Dictionary (1933) defines a schema as "a diagrammatic representation" in which schemata are "any one of certain forms or rules of the productive 'imagination' through which the understanding is able to apply its 'categories' to the manifold of sense perception in the process of realizing knowledge or experience". To put it simply, a schema-theoretical view of reading is founded on a scheme or a methodical arrangement - a definite pattern or plan.

Many authors have attempted to define and illustrate the words schema and schemata. They speak variously of

frameworks of knowledge organized into patterns. Although the terminology may differ, the basic premises seem the same. Since the early days of schema theory, we have encountered such terms as "model", "plan", and, of course, "schema". Diverse authors employ such names as "constructs", "slots", "rules", "patterns", "frames", "scripts", "variables", "stereotypes", "themes", "beliefs", "presuppositions", "knowledge units", "macrostructures", "generic knowledge structures", "memory organization packages", and finally "schemata". The terms thus indeed do vary, but the processing mechanism apparently remains the same. For the purposes of consistency, this work shall mainly employ the terms schema-schemata in discussing a schema-theoretical approach to reading.

Kelly (1955) spoke of constructs.. He said specifically "Let us give the name constructs to these patterns that are tentatively tried on for size. They are ways of construing the world" (p. 9). In like manner other theorists, which include Bartlett (1932), Tyler (1978), Oatley (1978), and Rumelhart and Norman (1978) have examined and developed the notions of schema-schemata. For these authors the schemata make the world accessible to the individual. Each schema is therefore a representation which enables the individual to make sense of the world, an active organization of past reactions, or of past experiences, a general model of a situation made

up of active interrelated knowledge structures - namely, schemata.

These schemata, or active interrelated knowledge structures, are seen as being engaged in the comprehension of arriving information, guiding the execution of processing operations. Such action schemata constitute much of our knowledge of how to do things. Essentially, they are frameworks of knowledge into which we slot information or make corrections to the basic knowledge already present. Oatley (1978) speaks of schemata as being mental representations. He elaborates:

Schemata then are representations of knowledge more or less well fitted (so far as we can understand) to particular tasks. There are varieties of representations for any given task or arrangement of the environment, and perhaps in evolution, in learning and in cultural development, what goes on is the acquisition of more appropriate, more powerful schemata. (p. 146)

Schema theory intricately involves all knowledge acquisition. Carrell (1983) suggests that schemata are background knowledge structures which are activated when a person interprets new material. Thus schema theory is seen as the basis of a reasonable theory of human information processing. As Wixson (1983) sees it, "Schemata are hypothesized knowledge structures, abstract entities to which human information processors bind their experience with real-world phenomena" (p. 414). In this light, schemata are seen as units into which knowledge is packaged and schema theory attempts to depict just how

that knowledge is represented in the mind and furthermore how that representation influences the way in which the knowledge is used (Cullinan and Harwood, 1983).

Schemata are generic knowledge units which together form a plan or pattern of experience. Smith (1982) affirms that in cognitive schema theory, schemata are generalized rules derived from experience which allow people to anticipate, interpret, explain, and act upon information about the self and the environment. Goetz, Reynolds, Schallert, and Radin (1983) also regard schemata as existing knowledge structures which together make up a model or schema based on prior experience but which also consist of slots into which new information is assimilated. This schema then is a pattern of action but is also a pattern for action.

Many other researchers and theorists also share in the notion that schemata are generic knowledge structures guiding the processing of information. These include: Norman and Rumelhart (1975), Bobrow and Norman (1975), Feibleman (1976), Adams and Collins (1977), Rumelhart (1979), Pylyshyn (1979), Fisher (1981), Eckblad (1981), Graesser and Nakamura (1982), Kintsch and Yarbrogh (1982), Landis (1982), Scarborough (1982), Pearson (1982), Schank (1982), Dean (1983), Freebody and Anderson (1983), Sanacore (1983), Beach and Appleman (1984), and Robinson and Schatzberg (1984).

Finally, Penny Baum Moldofsky (1983) provides readers with an excellent summary of schema-schemata when she writes:

Broader than a concept, a schema can be thought of as a framework of abstract knowledge that is both general and reflective of an individual's experiences. Rather than being static entities, schemata change as an individual processes new experience. Indeed, it is assumed that each schema has "slots" which are waiting to be filled as an individual fits new ideas into existing frameworks. (p. 740)

CHAPTER IV

THE PROCESS OF COMPREHENSION

The Influence of Prior Knowledge

One important aspect of a schema-theoretical view of reading is that schemata are reflective of experience; they are made up of a person's prior knowledge of the world. Therefore, in reading, what the reader brings to the text (previously acquired knowledge structures) plays a major role in textual comprehension. Many researchers such as Woodberry (1969), Oatley (1978), and Brown and Steinmann (1978) speak of the actions contributed by these knowledge units. In reading, the hearer or reader uses relevant knowledge to make inferences from the text. It is clear that this relevant knowledge can only be activated because a person does have certain prior experiences - these experiences make up his own mental model of the world. As Woodberry (1969) writes "The Reader's own experience is the key to literature" (p. 1). What the reader strives to do is to make meaningful sense of his experiences, to understand the data collected either from events and passions personal to himself or from the outside world. In order to do this successfully, the reader must bring to bear representations of knowledge:

Where, one asks, do these representations of knowledge come from? The answer is simply that certain

knowledge units have been garnered by an individual as he attempts to make sense of the world. These knowledge units, known as schemata, have been spoken of by many theorists who corroborate the notion that by definition schemata necessarily involve past experiences (e.g., Bartlett, 1932; Applebee, 1977; Goodman, 1984). These writers see that a schema refers to an active organization of past reactions, of past experiences, which must always be supposed to be operating in any well-adapted response. Any particular response is possible only because it is related to other similar responses, organized into regularities or patterns.

Thus we have a schema functioning, on the one hand, as an archive of past experiences and, on the other, as the basis for a set of reasonable expectations about what will happen next. What happens is that determination by schemata is the most fundamental of all the ways in which we can be influenced by reactions and experiences which occurred in the past. As Goodman (1984) assures his reading audience: "Readers must be capable of learning through reading in the sense of assimilating new knowledge to established schemata and also in the sense of accommodating existing schemata to new knowledge" (p. 111). Yet one must know that the ability of a reader to comprehend a given text is very much limited by the conceptual and experiential background of the reader. Depending on the previously acquired knowledge units,

there can, therefore, be very strong limitations on how much new knowledge can be gained from reading a given text.

Other writers support the belief that a reader does not approach a text "empty-handed" (or rather "empty-headed" as the case may be). Instead, they insist that background knowledge units are always employed in comprehension (e.g., Marshall, 1981; Schank, 1982; Tierney and Pearson, 1983; Golden, 1984). Readers know something about the information in a discourse before reading it. They use this knowledge to form expectations about both the discourse content and structure. Consequently, their reading is guided by their expectations. The fluency of their reading depends to a large extent on the way in which they use their background knowledge to guide their reading. As Schank (1982) asserts strongly: "The crucial determinant in what can be read by anyone, child or adult, is the amount of background knowledge they possess to help them determine the meaning of what they are reading" (p. 85).

The key point is that a reader learns words in terms of situations he understands, and in terms of knowledge already acquired. He learns words in terms of a situation and in terms of predictions and expectations he has made about that situation. These situations form the basis of his internal mental definitions for the word he has learned. Through the workings of this operation reading

becomes a recognition process. In order to read we must recognize each word. To recognize each word we must rely on our prior knowledge to help us. Once a reader has seen a word before it becomes easier to recognize it.

It remains clear that one cannot ignore the presence of prior knowledge units acting on a reader's perception in reading comprehension. Certainly the concerned theorists have not forgotten this aspect of comprehension theory. To repeat, they consistently emphasize the influences of past experiences. As Golden (1984) puts it: "For some time the key role of prior knowledge in reading comprehension has been recognized" (p. 578).

Numerous writers such as Wixson (1983), Tierney and Pearson (1983), and Freebody and Anderson (1983) show that reading is a process whereby the reader uses background knowledge together with the author's cues to create meaning. At this point one must emphasize that reading comprehension is not a one-sided process. Both the background knowledge units (schemata) and the cues contained in the text (the content of the text) are of equal importance in processing new information. Comprehension is shown to be a constructive process which involves an interaction between the information suggested by the message and the information provided by the comprehender's existing knowledge. Such an interactive theory of reading assumes that reading involves several levels of analysis. To repeat, these must include such

factors as background knowledge along with the author's cues working to construct meaning.

One can cite numerous other examples of research supporting these contentions. Included among these are the writings of Adams and Collins (1977), Hudson (1982), and Gordon and Braun (1983). These researchers suggest that in recent years there has been an increasing concern with the interaction between the reader and the written page. This interaction is such that the comprehended meaning of a message is fundamentally dependent upon a reader's knowledge of the world and his analysis of content along with the cues contained in the text. Thus readers should interrelate general ideas presented in text and link textual information with prior knowledge. Adams and Collins (1977) summarize:

A fundamental assumption of schema-theoretic approaches to language comprehension is that spoken or written text does not in itself carry meaning. Rather, a text only provides directions for the listener or reader as to how he should retrieve or construct the intended meaning from his own, previously acquired knowledge. (p. 4)

If we accept schemata as knowledge structures which are reflective of experience and necessarily open-ended, making up a person's model, pattern, or scheme of the world, we must then consider how this applies in a reader-response view of literature. It is clear that readers possess previously acquired knowledge units or schemata which aid in the process of comprehending new knowledge. Therefore, if, in fact, a reader brings to bear these

knowledge structures based on prior experiences and information, then recall or memory must certainly be an important part of such a means of processing information or learning. Schank (1982) puts it simply: "We understand everything we hear in terms of what we already know and have stored in our memories" (p. 11).

For many years, various prominent researchers have been concerned with the role of memory or recall in human perception processes (e.g., Bartlett, 1932; Landis, 1982). It seems apparent that a great amount of what goes under the name of perception is really recall. The observer reports what he perceives as he is presented with material. However, he does much more than this: he fills in the gaps of his perception by the aid of what he has experienced before in similar situations or by describing what he deems suitable to such a situation.

It is schema theory which contains the essential accounting of how memory influences perception (Bartlett, 1932). The schemata are constantly developing, affected by every bit of incoming sensational experience of a given kind. The influence of schemata is influence by the past, and remembering obviously involves determination by the past. What is involved is the notion of the recall or memory process as imaginative reconstruction. Bartlett (1932) summarizes as follows:

Remembering is not the re-excitation of innumerable fixed, lifeless and fragmentary traces. It is an imaginative reconstruction, or construction built out of the relation of our

attitude towards a whole active mass of organized past reactions or experiences, and to a little outstanding detail which commonly appears in image or in language form (p. 213).

We see that information is integrated in memory with existing knowledge. Consequently, previously stored information dramatically influences the way new information is understood.

One can report the work of many other writers who agree with these conclusions. Foremost among these are Norman and Rumelhart (1975) who suggest that "When concepts are represented within a person's memory, they must fit within the framework provided by general knowledge of the world. This world knowledge is extensive, encompassing all a person's experiences and all information that he has learned" (p. 6). Further to this, Rumelhart and Norman (1978) explore the question of how memory works within schema theory. They see that memories may be organized within schemata. In any new moment of learning these schemata are activated. It necessarily follows that these schemata are either equal to the situation or inadequate, either partially or wholly. If they are adequate, these writers believe, learning proceeds by accretion to the schemata. If, however, they are inadequate, some minor changes occur in the schemata to suit the new situation. These minor changes are referred to as "tuning". Within this theory it is also conceivable that in some instances the schemata may be

highly inadequate. In this case, there is a restructuring process which is a major modification of the schemata.

Hence, for these writers, "The act of comprehension can be understood as the selection of appropriate configuration of schemata to account for the situation" (p. 43). This selection of appropriate configuration of schemata is seen as a major portion of the processing effort involved in comprehension. Indeed, it is probable that the schema selected will determine the interpretation of the situation. This, of course, is quite a reasonable explanation for why different readers interpret the same material differently - a major concern, if not the basis, of schema theory. To reiterate, Rumelhart and Norman (1978) inform us: "Different schemata will thereby yield different interpretations of the same situation, and different features of a situation will take on more or less importance as a function of that interpretation" (p. 43).

Learning, a very complex activity, is a creative, flexible effort to make meaningful sense of the world. Readers use their prior knowledge in comprehending prose. In actuality, they translate material into their own representations (schemata) of the world. These schemata will be more or less adequate for coping with the task in hand. If inadequate, people will go on modifying their representations and perhaps through this process ultimately improve their performance. Memory is very much

involved in this human performance, and the importance of its role is recognized by many writers (e.g., Oatley, 1978; Graesser and Nakamura, 1982; Scarborough, 1982; Pearson, 1982; Goetz et al., 1983; Surber, 1983). These people hold that one cannot study comprehension without acknowledging that the representation of knowledge in memory is part of the process. This knowledge is organized schematically. It follows that one can possess schemata for all manner of things: the reader must decide what schemata to select in order to comprehend and remember a particular text. The schemata activated focuses attention and aids in processing the appropriate portion of a text. Thus it is clear that recall or memory are important agents in processing a text.

The Link Between Novel Experience
and Prior Information

The process of comprehension not only involves the applying of previous knowledge or information units in recognizing old material. Comprehension must also involve learning new information and processing new material. One must also react to the novel. Without new experiences no learning would ever take place, since an individual would stagnate, would never acquire new information or knowledge units. A crossover must somehow be achieved between old information and new material. Readers must form expectations and make predictions about what they are

about to read. Pearson and Tierney (1984) illustrate this quite specifically. They write:

The ability to perceive a text as a fantasy, science fiction, detective story, or comedy, or a character as a hero, villain, foil, scapegoat, or sidekick, activates a whole set of schemata and expectations associated with these prototypes. A reader then attends to the cues that will either verify or refute the prototype, testing out his inferences. (p. 140)

Inferential leaps are an important part of the comprehension process. They are essential in schema selection and instantiation (in deciding who or what in the text fills what slot and in filling slots with default values) (Pearson, Raphael, TePaske, and Hyper, 1981). Various writers place the emphasis on the process of inferencing as being necessary in order to acquire new knowledge (e.g., Adams and Collins, 1977; Flood, 1981; Schank, 1982; Goodman, 1984). These researchers see that an understanding of the interrelationships in a piece of writing typically requires a host of complex inferences. The skilled reader seeks to interpret or impose a structure on the passage as a whole. This involves active processing which does not exist solely within a text, but as a human act of cognition it occurs in the mind of the reader. It is the operation which readers perform while they are reading the text, the conclusions they draw from the material about the things that were not explicitly stated but which nevertheless are valid. As Schank (1982) puts it:

People understand more than they are told, directly. They make inferences and add implicit information to the explicit information they receive. One important source of inferences is the knowledge of standard, everyday situations. People can read more into a story when they have experienced a situation similar to one described in the story. (p. 101)

It is clear that the process of inferencing is an important operation in understanding a piece of writing. Constructing meaning is seen as a hermeneutical experience in which the reader strives for the fit between the whole and the parts and among the parts. To do this a reader fills in gaps or makes both uncued and cued inferences. Essentially, the complete process of comprehending is thus a holistic experience in which meaning is constructed. As Goodman (1984) explains:

In a transactional view both the knower and the known are transformed in the process of knowing. The reader is transformed as new knowledge is assimilated and accommodated. Both the reader's conceptual schemata and values are altered through reading comprehension. Since the published text seems to be a reality that does not change its physical properties as a result of being read, how can it change during reading? The answer is that the reader is constructing a text parallel and closely related to the published text. It becomes a different text for each reader. The reader's text involves inferences, references, and coreferences based on schemata that the reader brings to the text. And it is this reader's text which the reader comprehends and on which any reader's later account of what is read is based. (p. 97)

Goodman (1984) goes on to examine in more detail how inferencing and prediction work in achieving meaning. He concludes that these involve cycles, with each cycle being tentative and partial, melting into the next. It is

inference and prediction which make it possible to leap toward meaning without fully completing the optical, perceptual, and syntactic cycles. However, the reader, once sense is achieved, has the sense of his having seen every graphic feature, identified every pattern and word, and assigned every syntactic pattern.

For Goodman (1984) it is schema theory which explains this phenomenon to a considerable extent. The reader is always moving toward meaning, the goal of comprehending. In doing this he is continuously assigning the highest level and most inclusive schema available. It is the strategies and rules available to the reader which serve as schemata for schema formation. This schema use is always tentative; that is, a schema is assigned and maintained so long as it is useful but quickly modified or abandoned if disconfirmed in the process of its use. All this means that each cycle can only be understood in the context of the holistic process.

A person must acquire new knowledge and make sense of the world, must generate patterns in order to comprehend ideas and achieve meaning. This generating of patterns is a part of the learning process. As Hawkes (1972) puts it "We make the world up in other words, as we go along, and we experience it concretely" (p. 55). This is done through encountering new situations. What happens then is that meaning is never a stable or fixed quality. It is one which words or groups of words acquire in use. We do

bridge the gap between the known and the unknown in comprehending ideas, events, and beliefs. We organize ideas when we acquire new units of knowledge and assimilate them with previously acquired notions.

Reading is a process of discovery -- a creative enterprise. Through this process we organize our experiences into models of the world. This is done through recognizing familiar patterns and generating unfamiliar ones. Much of the current research relates the acquisition of knowledge to a schema-theoretical view of pattern recognition and pattern generation. Hence, we have a powerful relationship between recognizing familiar situations and generating new units of knowledge. One must consider what the researchers say about the interplay between the novel and the unfamiliar (e.g., Thomas, 1969; Mooij, 1976; Rumelhart and Norman, 1978; Tyler, 1978; Iser, 1978; Oatley, 1978; Miller, 1979; Petrie, 1979; Dean, 1983; Wixson, 1983; Moldofsky, 1983).

The research indicates strongly that knowledge acquisition involves both the known and the unknown. In actual fact, attempts to define the unknown must begin with the known. Man strives to understand until the unknown becomes the known; the unfamiliar becomes the familiar; the novel becomes old information. In this way the reader is then able to address newer and fresher material in already known terms. Thereby, clarity is achieved.

The reader must link the novel material with the familiar in the process of assembling meaning; he accommodates new knowledge to old, substitutes new schemata or patterns of knowing for old ones. As Rumelhart and Norman (1978) explain: "We analyze the sensory events of our current experience, match them with some appropriate set of schemata, form a representation for the experience, and tuck the newly created memory structures away in long-term memory" (pp. 44, 45). However, in order to accommodate new units of knowledge, the schemata have to be reshaped in the process of assembling meaning. This does involve not only the recognition of like patterns or appropriate schemata. Rather, Rumelhart and Norman (1978) speak of patterned generation, in which "A new schema can be patterned on an old one, consisting of a copy with modification" (p. 46). Indeed, the more the material presented is further from our familiar world, the more we need new conceptual schemata. In learning, what goes on is the acquisition of schemata which are more powerful, more appropriate.

During the integration of old and new information there is a resulting adjustment in the reader's existing schematic state. This is so, because in order for learning to occur, there must be some modification of the schemata or knowledge base. Again we realize that a schema-theoretical view of knowledge acquisition naturally allows for open-endedness. We cannot just recognize

familiar landmarks, for no new learning would then occur. To repeat, we must constantly add, refine, delete, and modify already existing knowledge structures or schemata.

Moldofsky (1983) says it well when she writes that, schemata are not static entities. Indeed, she states that "Each schema has 'slots' which are waiting to be filled as an individual fits new ideas into existing frameworks" (p. 740). Hence reading can be seen as a process - a building of bridges. This building of bridges links the world of novel experience with that of old information, transfers the knowledge base from the known to the unknown. We must consider further how the process works: how readers use information units - decide which are appropriate schemata in selecting, comprehending, and remembering a particular piece of information.

This brings us to the question of the interpretation process. One can define interpretation, quite simply, as the problem of making meaningful sense of the world. As Bruns (1982) suggests, "The matter may be expressed as follows: The concern here is with what is hidden and with the task of bringing it into the open or into the light. This is the task of interpretation: the so-called hermeneutical task" (p. 112). Seung (1982) speaks further to the notion of interpretation as "The hermeneutic circle of the whole and parts: that is, the whole can be understood only through the understanding of its parts but

the parts can be understood only through the understanding of their world" (p. 48).

Reading is, of course, very much a matter of interpretation. Theorists such as Tyler (1978), and Mitchell (1982) corroborate this notion. They see that reading can be loosely defined as the ability to make sense of printed symbols. A reader uses these symbols to guide the recovery of information from his memory and subsequently uses this information to construct a plausible interpretation of the writer's message. Thus, reading a text is synonymous with interpreting a text, and it follows the same basic principle of interpretation. What is involved is a basic hermeneutical principle whereby understanding a text is a circular process in which we presuppose that the text is a whole composed of a hierarchy of parts or topics. Construing the parts constitutes the whole. This construction of the text is perspectival and open; it has more than one interpretation, and necessarily so.

Consequently, reading a text and interpreting the material read is not a simple task. Rather, it involves very complex processes. Much more than the knowledge of words is required to understand a sentence. There must be general knowledge about the world. To understand a sentence, we appear to combine general knowledge of the world with knowledge of the structure of language and the meaning of the parts of the sentence. Actually, a good

deal of problem-solving behavior is required to determine the exact meaning conveyed by language (Norman and Rumelhart, 1975).

Oatley (1978) speaks of the process of interpretation. He writes:

Perception can be characterized as making meaningful sense of data collected from the outside world. Typically data offered to us in visual and language form are incomplete. The problem is to take these fragmentary ambiguous data and interpret them so that we can understand the world in terms of our relationships with it. The argument developed in this book has been that in order to do this successfully the perceiver must bring to bear representations of knowledge. (p. 229)

These representations of knowledge we recognize as schemata.

Schema theory can suggest answers to the problem of interpretation, whether in reading or in all other cognitive processes. It is in this light that Adams and Collins (1977) see that "Schema theory provides a way of integrating our understanding of text with our understanding of the world in general" (p. 41). These writers elaborate further. They propose:

Reading comprehension depends as much on the reader's previously acquired knowledge as on the information provided by the text. Moreover, comprehension depends on the reader's ability to appropriately interrelate his knowledge and the textual information both within and between levels of analysis. The power of schema-theoretic models of reading lies in their capacity to support those interactions through a single, stratified knowledge structure and a few basic processing mechanisms. (p. 39)

If we accept a schema-theoretical view of comprehension in which we hypothesize new knowledge units and fill in gaps to process new knowledge as well as recognize old material, then we must also consider how the process works.

There would appear to be two separate modes of utilizing schema in comprehending. These are schema identification and schema application, respectively. Graesser and Nakamura (1982) speak of these two differing stages of schema utilization. They see schema identification as "A process of pattern recognition" (p. 62) in which the information accrues in a data-driven fashion. They regard schema application as the part of the process in which "the schema guides processing in a conceptually-driven fashion. During schema application, the schema imposes an interpretation on the input, guides attention, operates inferences and formulates expectations" (p. 62).

The major question of concern here relates to the operation of these processes in reading. Does processing take place in terms of a data-driven or a concept-driven fashion? Do the data form the schemata, or is it that the schema selects the data to be processed?

There is certainly ample evidence to suggest that processing does occur in both these manners. Indeed there seems to be a consensus of opinion among researchers which allows that the process appears to work both ways

simultaneously; that processing is both a data-driven, bottom-up process, and a concept-driven, or top-down method. Thus a reader will use the cues of the text or the data to assimilate information. Likewise, a reader uses his already existing knowledge or schemata framework to aid in processing this knowledge. The important thing to note here is that these processes are not operating independently of each other. Rather, they occur at all levels of analysis at the same time.

Various authors have attempted to clarify the situation (e.g., Norman and Rumelhart, 1975; Bobrow and Collins, 1975; Adams and Collins, 1977; Rumelhart and Norman, 1978; Oatley, 1978; Pylyshyn, 1979; Eöckblad, 1981). Among these, Norman and Rumelhart (1975) outline the following scenario:

If perceptual interpretation is a matter of mapping sensations onto structural schemata, which happens first: interpreting the whole or interpreting the parts? How can someone recognize a face until he has first recognized the eyes, nose, mouth, and ears? Then again, how can someone recognize the eyes, nose, mouth, and ears until he knows that they are part of a face? This is often called the parsing paradox. It concerns the difficulties encountered with either a pure "bottom-up" (part-to-whole) or a pure "top-down" (whole-to-part) strategy in interpretive processing. The solution I propose is that, under most circumstances, the interpretation of parts and whole proceeds simultaneously in both bottom-up and top-down directions. (p. 295)

It appears reasonable to suppose that processing does occur simultaneously in both directions at all levels of analysis. Because the process of reading requires the

integration of all levels of representation of the text, an active reader does more than simply decode the visual information before him, letter by letter, word by word. Instead, information flow goes in both directions. At the same time as the visual and perceptual systems are passing up the results of their analyses to higher-level processes, semantic and syntactic systems are passing their information down to bias the perceptual systems. According to Norman and Rumelhart (1975), the process of textual reading ultimately requires the integration of the bottom-up analysis (working up from the physical features) and the top-down analysis (working down from semantic and syntactic considerations).

The notion that bottom-up and top-down processing occurs at all levels of analysis simultaneously is clearly a viable perspective of comprehension. The system is believed to be driven both by the data and conceptually-guided. Indeed, this is a crucial idea for a schema-theoretic account of reading comprehension. It involves the coordinated activity of schemata at all levels of analyses. Adams and Collins (1977) explain:

As schemata at the lower levels (e.g., visual features) are activated, they are bound to and thus evoke schemata at the next, higher level (e.g., letters); as these schemata are activated, they, in turn, trigger their own superordinate schemata (e.g., words). In this way, through bottom-up processing, the input data are automatically propagated up the hierarchy toward more meaningful or comprehensive levels of representation. At the same time, schemata at higher levels are competing to fill their slots with elements from

the levels beneath through top-down processing. Again, the theory is that, for the skilled reader, both top-down and bottom-up processing are occurring simultaneously and at all levels of analysis as he proceeds through the text. (p. 13)

Basically this is known as the hermeneutical position which allows that as top-down and bottom-up processes operate simultaneously at all different levels of analysis, they work to pull the various fragments of information into a coherent whole. Consequently, it appears that schemata are data-driven in the sense that they respond to the existence of relevant data, but schemata also perform conceptually-driven guidance to the processing by offering internal conceptualizations to add new data, thereby guiding the processing of other schemata. Because each stage of the operation is able to influence the other, there is further evidence that actual perception involves both "bottom-up" and "top-down" synthesis.

The person is steered by the demands of the material, and in turn he forms it according to his own schemes. What happens is that he is active and is approaching the environment on the basis of his own structures, and, at the same time, he is responsive to information coming to him from the environment (Eckblad, 1981). This notion can be compared to the processes of assimilation and accommodation in Piagetian theory. Pilyshyn (1979) follows this line of reasoning when he proposes that

assimilation and accommodation are essential components of processing. He suggests:

Assimilation refers to the process by which the environment is made cognitively accessible by incorporating some of the effects into relatively stable intellectual systems called "schemata". Accommodation, on the other hand, refers to the slower but no less systematic and persistent manner in which the schemata themselves change in response to the demands of the environment. . (p. 421)

Clearly, we can answer in the affirmative to the questions posited earlier. Yes, processing does take place in both a data-driven and a concept-driven fashion. Indeed both these processes operate simultaneously at all levels of analysis. And in fact the data do form the schemata, but the already present schemata in turn select the data to be processed.

At this juncture it may be expedient to examine more closely the operation of interpretation as it involves both bottom-up and top-down processes. Various writers see that a successful reader uses his knowledge carefully; at just the right moment he accesses just the right knowledge structures necessary to interpret the text in a way consistent with his goals (e.g., Pylyshyn, 1979; Mitchell, 1982; Tierney and Pearson, 1983). It is true, then, that the goals set by a reader can determine the knowledge he calls up, and, at the same time, that knowledge, modified in conjunction with the reader's engagement of the text, causes him to alter his goals.

These, of course, are the bottom-up and top-down processes at work in accessing knowledge.

Mitchell (1982) discusses both forms of processing and how they operate in acquiring new knowledge. He writes:

With the first kind of interaction the processing starts with the raw input and passes through increasingly refined analysis until the meaning of the text is eventually determined. This kind of processing is therefore known as data-driven or bottom-up processing. The term "bottom-up" simply refers to the fact that the processing of a stimulus starts at the more peripheral levels and proceeds to "higher" or more sophisticated levels in the system. (pp. 44, 45)

Mitchell (1982) continues on to discuss the second mode of processing. He clarifies in this manner:

The second kind of interaction is produced when decisions made at the higher levels in the processing system are used to guide choices at lower levels. This is referred to as top-down processing. In order to analyse the text in this way the reader has to draw upon his knowledge of the world and his knowledge of the structure of the sentences. For this reason this kind of analysis has also been termed conceptually-driven processing. (p. 106)

There are separate roles played by these differing modes of processing. It seems apparent that bottom-up interactions make a significant contribution to processing during most, perhaps all, of the substages of reading. It has also been suggested that there are top-down influences at most levels of processing including the extraction of visual information from the page, the recognition of words, and the processes that are employed to parse sentences. A number of researchers, which include Adams

and Collins (1977), Rumelhart and Norman (1978), Fisher (1981), and Mitchell (1982) speak to these notions.

These researchers suggest that bottom-up processing occurs when schemata that have been identified suggest other candidate schemata, either at the same level or the next level up. It follows that top-down processing occurs when schemata that have been suggested try to find schemata, either from the same level or the next level down to fill out their descriptions. These are data-driven in the sense that they respond to the existence of relevant data and conceptually-guided in the sense that they use their internal organization of concepts to add new data, to guide the processing of other schemata. In these ways when a schema identifies something, it attempts to integrate the data into its organizational structure and add new information in the form of structured clusters of knowledge that represent objects, events, and actions—namely, schemata. There appear to be at least two types of these schemata: the more abstract level includes the top-level structures such as comparison and story grammar; the more concrete includes schemata for such things as a face, a restaurant, a birthday party, and building a house (Fisher, 1981).

Reading comprehension is explained in a schema-based model as the process of both choosing and verifying conceptual schemata to account for the material to be understood. It is significant that schema-based models of

reading operate on the assumption that all data must be accounted for. We have already agreed that perception involves an interactive combination of top-down and bottom-up processes operating simultaneously. Let us further examine how various researchers explain the accounting for data in terms of these processes (e.g., Bobrow and Norman, 1975; Bobrow and Collins, 1975; Adams and Collins, 1977).

It seems obvious, according to these theorists, that within schema theory, interpretation is guided by the principle that all data must be accounted for. Therefore, every input event must be mapped against some schema, and all aspects of that particular schema must be compatible with this input information. This requirement, therefore, results in the two basic modes of information processing. The first mode, the bottom-up processing, is evoked by the incoming data. The features of the data enter the system through the best-fitting, bottom-level schemata. These schemata converge into higher level schemata, which, in turn, are then activated. In this manner, the information is propagated upwards through the hierarchy, through increasingly comprehensive levels of interpretation. The other mode, top-down processing, operates in the opposite direction. It occurs as the system searches for information to fit into partially satisfied higher order schemata. These are active processing elements which are provoked by way of higher level purposes and expectations.

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Thus a fundamental aspect of the structure of material which is contained within a large, intelligent memory system is that the contexts in which units of this stored information are accessed are critically important in determining how that knowledge is interpreted and used. Within this schema-theoretical view of accessing information "One schema refers to another only through use of a description which is dependent on the context of the original reference" (Bobrow and Collins, 1975, p. 132). It follows that schemata are event driven in the sense that all input data automatically invoke processing. These input events must be accounted for. They generate descriptions which are then fed into a number of potential contexts of interpretation. Some of these may be suggested by these descriptions themselves. The sensory input is consequently fitted into a context, if a quick match is found. This context may be a nonprimitive sensory construct whose description may allow it to be fitted into a higher level context schema. Associated with this schema may be procedural information which indicates an action to be taken if an instance is found. Such action may demand only low-level responses or may request full use of the central processing facilities. As well, other internal events can invoke automatic processing. In this manner one sees that the recognition of a familiar object in unfamiliar surroundings may trigger special responses.

It can be seen that all the input events must be accounted for, but the system also involves conceptual processing, which means that some conceptual schema has to be located for which the data are appropriate. If, in the central analysis of the moment, the data are seen not to be of importance, then almost any schema will do. If, however, the data appear to be important - an importance which is determined by the nature of the schema for which they seem to be relevant - then processing will probably be necessary to elaborate on the manner in which these data are interpreted beyond that provided by the initial schema. This need for further processing (when the data cannot readily be accounted for) probably creates an interruption in the processing cycle. The data will demand sufficient resources from the system to enable them to be processed enough to be understood at whatever level is necessary.

There are really two principles operating (Bobrow and Collins, 1975). There is the principle that all the data must be accounted for, which guides the bottom-up processing. There is also considered to be a single, conscious, high-level mechanism which guides the conceptual processing and takes into consideration the motivation and purposes of the organism.

We should further examine the assumption that in schema-based models of reading there is a single central mechanism guiding the conceptual processing. As Adams and

Collins (1977) suggest, "The notion that the human mind is guided by a central, limited capacity processor is, by now, taken for granted within many psychological theories of information-processing" (p. 9). These theorists explain, further:

Some mechanism which has access to all memory schemata must guide the interpretive process. This is necessary in order to decide when a schema has been adequately filled out for the current purpose, to evaluate the goodness of fit of the data to the schemata, and to detect and appropriately connect metaphorical or analogical references. (p. 10)

This single central mechanism has also been attested to by Bobrow and Collins (1975). They suggest that one important aspect of the organizational structure of processing concerns the interactions of conceptually-driven and data-driven schemata. For these researchers there must exist several overriding considerations, if the system is to have any function at all. There must be some purpose to these activities. There must be some procedure for selecting from among all the different activities taking place at any moment those that are most important for the purposes of the system. Basically, the system must be provided with motivations to provide top-down drives, a capacity to learn, and an ability to be aware of itself - thus the conclusion that there is reason to postulate a single central mechanism having many of the properties which are ascribed to human consciousness.

Bobrow and Collins (1975) describe this central mechanism in more detail. They write:

We believe that all these considerations together require that the system be guided from the top by a single central mechanism, one with awareness of its own processes and of the information sent to it by lower order schemata. We believe this central conscious mechanism controls the process that schedules resources, initiates actions by making decisions among the alternatives presented to it, and selects which conceptualizations to pursue and which to reject. (p. 147)

We have already demonstrated that processing is an interactive combination of top-down and bottom-up processing operating simultaneously. There are, however, limitations to this processing. One must examine both data-limited and resource-limited restrictions on processing. Adams and Collins (1977) speak of these notions. They see that the data that are needed to fill out the schemata become available through bottom-up processing: top-down processing facilitates the assimilation of the data, if they are anticipated or are consistent with the reader's conceptual set. It is bottom-up processing which insures that the reader will be sensitive to information that is novel or that does not fit his on-going hypotheses about the content of the text. The top-down processes help him to resolve the ambiguities or to select between alternative possible interpretations of the incoming data. Because of these interactions between top-down and bottom-up processing, the flow of

information through the system is considerably constrained. As these researchers put it:

Taking this notion back to the schema-theoretic model, we see that there are two basic ways in which the processing capabilities of the system may be limited. First, there may be some difficulty in mapping input data to the memory structure with the result that their normally automatic, bottom-up propagation through the system is data-limited. Second, the various simultaneous demands for active control may exceed the system's capacity to cope; in this case, the system is resource-limited and the execution of some of the ongoing activities will be compromised. Both kinds of limitations are relevant to the reading process. (pp. 10, 11)

Finally, it is clear that human information processing is very complex. Bobrow and Collins (1975) sum up our notions of automatic and conscious processing operating simultaneously. They write:

Conscious processes are invoked whenever underlying schemata provide information for evaluation, whenever new processes must be invoked or old ones terminated, or whenever the output of one schema must be communicated to others not immediately invoked. Any time that there is a mismatch between data and process or expectations and occurrences, conscious processes are brought in. The automatic, active schemata of memory and perception provide a bottom-up data-driven set of parallel, sub-conscious processes. Conscious processes are guided by high level hypotheses and plans. Thus consciousness drives the processing system from the top-down, in a slow, serial fashion. Both the automatic and the conscious processes must go on together; each requires the other. (p. 148)

CHAPTER V
FROM THEORY TO TEACHING LITERATURE

Implications for the Teaching of Literature

If a schema-theoretical view of reading is a viable approach to understanding reading comprehension - and the research certainly suggests that this is so - then as teachers we must be concerned with the implications of such a process-oriented approach to the reading and interpretation of literature. The question of vital importance to us concerns how we might modify the English curriculum to accommodate these ideas.

Perhaps the first step towards a composing model of reading is becoming aware of its existence. As teachers we need to know that such research is available and that it can indeed be verified. It is clear that quite often we teach as if we were literary critics who expect our students to be literary critics. No longer is such a narrow approach to reader response justified or even acceptable. Iser (1978) speaks of the literary critic who tries to explain the meaning he has discovered. Using this approach, literary criticism proceeds to reduce texts to a referential meaning. This is in spite of the fact that such methodology has already been persistently questioned, and was put to question as early as the end of the last century. As Iser (1978) writes, "The traditional expository style of interpretation has clearly had its

day" (p. 10). This writer posits that it is in the reader that the text comes to life. Therefore it is the process of reading that needs to be investigated. It is when the text is experienced that it begins to unfold its potential. There is no right interpretation, and therefore it is fatal to try to impose any single, sole meaning on the reader.

Granted that this may be a newer, somewhat mystifying approach to interpreting literature; hence, many teachers may fear such an open-ended approach in which they can no longer delineate a "right answer". It would appear to make life easier (for the teacher) if one requires students to elicit an already assigned meaning. This, however, does not justify the continuance of methodology already shown to be unacceptable. The teacher must make allowance for the personal subjective experience of the responder while still maintaining the commonality of knowledge grounded in and structured by the text.

It would appear that one major problem people have with accepting the notions of schema theory as a means of comprehension or information processing is the subjective nature of the approach. Although the very definition of reading as an interactive process between text and reader removes the possibility of a purely solipsistic interpretation simply because of the constraints provided by the text, for many this realization is not self-evident.

As human beings we do live in a subjectively constituted world. Poole (1972) verifies this when he speaks of solipsism as being "An incurable state into which we are born" (p. 131). Wellek and Warren (1977) also speak of this subjective experiencing. They see that every individual piece of reading contains something idiosyncratic and purely individual, something which is coloured by our moods and our perceptions, and ultimately by our backgrounds. Therefore, even two readings at different times by the same person may vary considerably.

It is the meaning of our experiences which constitutes reality. We believe that we experience things as they are so long as we have no good reason to believe otherwise. Hence the world inside our heads proceeds from our experience of the world; we make sense of the world around us and as agents we act in the light of the sense we make (Hudson, 1975). The notion of what is there is basically what we construct. This, however, is not a fixed entity. We hypothesize patterns and account for things, but these models are constantly being reevaluated and revised so that our constructed models of the world can relate to new knowledge and experiences. Thus we proceed from prior experience but also react to new data; in this case the new data specifically involves new texts. As readers we may interpret variously, yet it must be remembered that any interpretation is not completely

subjective to the point of becoming unreasonable or bizarre.

First of all, our world is never wholly private, for each of us is born into a historically given world that is simultaneously both natural and socio-cultural. Various researchers such as Woodberry (1969), Seung (1982), Goodman (1984), and Harste, and Mikulecky (1984) attest to this notion. They speak of the idea of cultural sharing in which readers in a given culture, interpretive community, or classroom share a certain meaning from reading a piece of material. Readers share a human nature which is common to the race besides special traits of their particular ages and countries. Language is a part of this complex human culture and this necessarily includes written language. As readers experience this written language their interpretation is culture-bound because of the shared cultural context.

The world is an intersubjective one; each of us is an element in the life situation of others just as they are in ours. Therefore, for the most part, we do share a commonality of experience which also serves as a constraint upon our perceptions. As Peacock (1972) suggests, "Subjectivity is not equivalent to the eccentric, the absolute private, which is mental isolation or breakdown. The subjective is the inter-subjective; it is something that can be understood by, and shared with others, though not necessarily all others" (p. 37).

The idea that experience can be shared is not a recent notion. Kelly (1955) spoke quite clearly of how each of us can construe events in the world of others through the sharing of common ground or cultural identifications. He saw that it is true that no two people can play precisely the same role in the same event, even though they may be very closely associated. But this does not mean that there can be no sharing of experience. Rather, he explains:

Each may construe the likenesses and differences between the events in which he himself is involved, together with those in which he sees that the other person is involved. Thus while there are individual differences in the construction of events, persons can find common ground through construing the experiences of their neighbors along with their own. (pp. 55, 56)

When we read a text we are put into touch with some other person's accounting of the world. In essence, we are allowed to transcend another's world. To this we react in terms of our own personalized schema bounded by the constraints structured in the text itself.

The notion that the text itself provides constraints for the reader is a necessary and integral aspect of schema theory research. Holland (1975) speaks of this when he says that each reader is free to react in as extreme a manner as possible. However, he believes that most reading is not solipsistic. He states: "Every reader has available to him what the writer created - the words on the page, that is, the promptuary (a store of

structured language) from which he can build an experience" (p. 286). McFadden (1978) agrees with Hollard when he suggests: "By nature of its strata of sounds and meanings, the work is intersubjectively accessible, and can also be reproduced" (p. 49).

Other researchers who support these notions include Iser (1978), Tyler (1978), Culler (1981), and Wellek (1982). Each of these writers has something precise and definitive to say about interpretation being constrained by the text itself. They clearly refute the stand that literary interpretation is a purely subjective, solipsistic act. The reader's reaction is not arbitrary but instead is prestructured or guided by the language of the text itself. In this way, each text builds an immanent structure for its own interpretation and that interpretation must be constrained by the limits of the text itself. Consequently there is no complete liberty of interpretation. A reader does not forfeit all claims to objectivity. As Wellek (1982) writes:

Ideally interpretations can be correct. If all interpretations or readings were equal we could not differentiate among them. But it is surely the experience of every teacher that he can and must reject wrong interpretations and that he even can, in concrete cases, refute a wrong interpretation by an appeal to the text or an appeal to the totality of a work while the perverse interpreter may have fastened on some detail or distorted the meaning of a phrase. The concept of adequacy of interpretation leads clearly to the concept of correctness of judgment. Evaluation grows out of understanding; correct evaluation out of correct understanding. (p. 52)

Accepting the notion that reading is a personal subjective experiencing, perhaps the single most important directive that we, as teachers, can take from this reader-response view of reading comprehension is the cue to somehow structure the experience for the reader - we must personalize the experience. Therefore the teacher has to set up the reading situation so that the student is allowed to react on his own level with the material. As Holland (1975) sees it, "Readers read differently because of their different personalities" (p. 203). Their reading results in a personal pattern in which insight and self-knowledge are the ultimate life goals in interpreting literature (Peacock, 1972; Altken, 1976). Therefore the student must be allowed the freedom to read variously, and in his reading he should learn something of himself and his world.

In view of this, the teacher has a responsibility to consider the individual student. This is confirmed by various researchers who see that literature is an exploration of a vast range of individual perceptions and attitudes (e.g., Morgan, 1977; McMaster, 1977; Martin, 1981). Teachers of literature must allow for the individual in a centered, personalizing world, must remember that the study of literature can expand unique and personal lives. By enabling the student to experience the great variety of human responses available through

literature, the teacher encourages him to extend his own personal world.

Overall, a schema-theoretical view of the composing process requires us to modify many of our traditional views of reading comprehension. As language (literature) teachers, the implications of such modifications are important notions for us to consider. We need to pay more attention to how human beings construct their personal worlds - namely, how each of us constructs meaning. We need to concern ourselves more fully with the viability of readers as agents who construct interpretations:

Man is a creative force in his own world. As Kelly (1955) suggested, "Each man contemplates in his own personal way the stream of events upon which he finds himself so swiftly borne" (p. 3). For students, reading is a necessary part of these streams of events. The teacher must proceed with this notion clearly in place. As Holland (1975) posits, "Each act of reading is constructive. It makes something new, something human, something personal - or else no real act of reading takes place" (p. 122). Following hard upon this, Holland has some advice for the teacher. He shows the ideal to be that "Together, teacher and students create a space that contains the literary work and into which some individuals project their own statements about the work and from which all draw resources to synthesize their own experience of it" (p. 216)..

This personal experiencing of events (in this case, events in literature) is, of course, rooted in "belief". Brown (1977) warns us: "One conclusion to be drawn from this is that any inquiry - whether scientific or religious or artistic - must be based in part on a personal and, in a sense, nonrational belief" (p. 46). We do apparently proceed from belief, and as teachers we must be aware of this aspect of knowing.

We think of Gerald Bruns' (1982) definition of invention as "The act of finding things to say, and saying them for whatever purpose" (p. 1). Our purpose, in this case, is to interpret. In reading and interpreting we invent meaning which is not fixed; rather we see it as constantly needing to be replenished. Interpretation is, therefore, a constructive act, an activity of self-correction and progressively emended readings. In light of this, interpretation can never be unilateral; it must need be grounded in the personal; for understanding a representation will always involve us in self-understanding.

Brown and Lyman (1978) inform us that we all create worlds. They regard interpretation as a rigorous way of knowing and believing: through interpretation we come to understand our activities and ourselves. By supporting and fostering a personalized view of interpretation in our students, we encourage moral participants in a community - the community of language. It is this notion of allowing

students to become agents in the constructing of meaning that has to be our goal as teachers of literature.

In conclusion, we recall the words of Goodman (1984), who writes:

Since comprehension results from reader-text transactions, what the reader knows, who the reader is, what values guide the reader, what purposes or interests the reader has will play vital roles in the reading process. It follows then that what any reader comprehends from a given text will vary from what other readers comprehend. Meaning is ultimately created by the reader. (p. 111)

Suggestions for Improving the Teaching of Literature

From these various research efforts based on a schema-theoretical approach to reader response have come certain specific suggestions for improving the teaching of literature. After all, for high school English teachers, the central concern always should be to facilitate the process of reading and thus simultaneously engender literary interpretation.

It is true that there are many practical strategies available for implementation in the classroom. Actually, such techniques have been discussed in the literature for quite a few years, yet there obviously remains a major gap between the nature of schema theory and the converting of these notions into realistic practice in the classroom situation. Moldofsky (1983) addresses this issue when she allows that "The abundant research on schema theory has

not helped teachers bridge the gap between schema theory and teaching strategies" (p. 740). Consequently there is a strong need to present these suggestions in as direct a manner as possible. In light of this need the remainder of this work will focus on providing some basis for the discussion of practical teaching strategies which could be developed in response to schema theory.

The teaching of reading comprehension is vital to the process of interpreting literature. By reading comprehension we do not mean merely the ability to decode words but the ability to extract the meaning from the written page. This depends on the intricate coordination of visual, linguistic, and conceptual information-processing systems (Adams and Collins, 1977). The notions of schema theory can provide a means of directing this process of reading; these notions call attention to the process itself which is the main focus of concern in reader-response theory. Essentially, the instructor must try to teach a schema that provides learners with a process for interpreting stories (Moldofsky, 1983).

All of the research cited in the previous chapters has consistently reinforced the principle that the interactive workings of both previous background knowledge and new knowledge units are of prime importance in a schema-theoretical view of reading. Thus any suggestions for improving students' knowledge are of paramount significance to teachers of reading. In fact this

importance cannot be underestimated. The teacher of reading would do well to consider these ideas for teaching reading comprehension and literary interpretation.

To begin, it has already been clearly established that using background knowledge is an important part of the reading process. Actually it seems apparent that if a reader is not actively using background knowledge then a significant part of the reading process isn't taking place (Carrell, 1983). The teacher must recognize that herein meaning comprehension suffers and therefore must try to personalize the experience for the reader so that background knowledge is activated.

Perhaps the first step for the reading instructor is that of assessment. If activating background knowledge units is of such importance, then the teacher must find out what a child currently knows so that he can build upon these knowledge units. Once the teacher is aware of how much the reader already knows about the situation he can then proceed to teach the reader to rely upon this world knowledge. The reader can learn to apply the appropriate knowledge to help fill in the details behind that situation. Therefore what needs to be taught to facilitate comprehension is world knowledge and the processes that utilize that knowledge (Schank, 1982).

We have already seen that this background knowledge is organized into units known as schemata. It is the teacher's job not only to ensure that a child possesses

the necessary relevant knowledge units but also to see that the child knows how to use these schemata to aid in processing reading. Problems in reading comprehension may be traceable to deficits in knowledge. In other words, poor readers may not possess the schemata needed to comprehend passages of a text. It is also true that in some cases these readers may possess the relevant schemata but not know how to activate them in bringing meaning to bear. Or, indeed, such readers may not be able to change schemata when the first one tried proves inadequate.

In all of these cases it is clear that poor readers either lack the background knowledge required to comprehend stories or lack the ability to utilize this knowledge properly. Since good readers already seem to possess the necessary strategies for using their world knowledge to understand the situation at hand - namely, the material to be read, the teacher must ensure that poorer readers engage in background building. Because the teacher understands the structure of knowledge in his area these needed pieces of background information can be filled in through using strategies such as class discussion, in which the interaction with the group will develop and refine the schemata necessary for comprehension (Robinson and Schatzberg, 1984).

At this point we should reiterate that the notions of schema theory not only involve utilizing background schemata but also concern the acquisition of new knowledge

units. Together, these interact to form a reader's knowledge bank and to direct the process of comprehension. Therefore, in order to learn, the reader must acquire new knowledge units which interact with previously acquired schemata to facilitate comprehension. It follows that once the teacher has ensured that the readers are activating prior knowledge, there may be a gap between what they already know and what they need to know in order to comprehend the text.

The reading instructor can, at this point, take a cue from Schank (1982) who believes that the context method is how reading must be taught. Within this method the acquisition of new knowledge is emphasized first. This new knowledge brings with it a new vocabulary which is added to the reader's sight-recognition vocabulary. Knowledge of the whole situation is what enables the reader to make the necessary connections in the text, so that he can gain new knowledge.

One of the main points that emerges from this approach to reader-response theory is the notion that the reader must access the necessary new vocabulary to allow for the acquisition of new knowledge. Is this not why the reading instructor tries to make sure that the vocabulary encountered is recognizable to the student? We must not only set up the experience for the student; we must also ensure that such a notion is attended to. This is of prime concern as a main step in facilitating reading

comprehension. Therefore an important directive for the teacher is that he must in some way ensure that the reader learns new words. This is the first step towards meaning.

The reading instructor can come back to the context method of reading which emphasizes the acquisition of vocabulary. It follows that the instructor must present words in terms of situations which allow the student to interrelate old knowledge units with the new knowledge to form new schemata which in turn access the material being read. In this way literary interpretation should proceed on cue. Schank (1982) verifies this. He writes:

Since the meanings of words are very complex, and usually situationally-based, there really cannot be any other way for a child to learn new vocabulary. He does not learn one word in terms of another. He learns words in terms of a situation and in terms of predictions and expectations that he has already made about that situation. Such situations form the basis of his internal mental definitions for the word he has learned.

The key point then is this. A child learns words in terms of situations that he already understands, and in terms of knowledge that he has already acquired. At any point, a child has more knowledge than he has vocabulary available to express that knowledge. Give him vocabulary at the right level and he will learn very quickly. The key to teaching vocabulary is the assessment of the child's knowledge. (p. 14)

A major point to be recognized here is that the assessment of the child's knowledge must necessarily involve recognizing the position of the reader in terms of the situation at hand. Indeed it is essential that the reading instructor present words in terms of the situation and the predictions and expectations that the child has

already made. In view of this, the teacher has first to recognize that the reader does possess an ability to meet a situation by forming expectations and making predictions to cope with the current material. Indeed, being able to predict is of prime importance in understanding, because we predict nearly everything that is a part of the comprehension process. To a considerable extent it is prediction which forms the basis of our ability to read (Schank, 1982).

The teacher must understand what is meant when he is directed to make use of a reader's predictive knowledge to help the process of understanding. What is this predictive ability? Schank (1982)* provides some clarification. He writes:

What does it mean when we say that we rely upon our ability to predict during the process of understanding? By that, I do not mean that we "know" with great certainty what will come next. Nevertheless, we do have an "idea" about it, and this idea is used by our comprehension processes in selecting alternatives. Thus our predictive abilities make out processing easier by narrowing the number of possible false paths we might choose in ambiguous circumstances. This predictive ability is useful in every single part of the comprehension process. (p. 25)

The instructor not only must recognize that readers do possess this predictive ability but also must see to it that they make use of it. The teacher can capitalize on a reader's predictive ability in order to facilitate reading comprehension. He must see to it that the reader is able to make a wide range of predictions and indeed he must stress the need to predict. As the reader improves in

understanding, his predictive sense can be directly honed. This, actually, forms a large part of what must be taught in the teaching of reading prowess. The teacher must help readers to organize their knowledge, then to use this knowledge to create expectations before and during reading (Marshall, 1981; Schank, 1982).

These notions are directly linked to a reader-response view of teaching literature. Readers do normally possess schemata which allow them to formulate predictions and expectations, a process by which they may account for incoming data. In fact, a schema allows reasonable predictions to be made about any situation to be encountered.

It is true, however, that a reader does not always possess the schemata necessary to guide reading. Then too, the reader may possess the knowledge units but not activate these schemata in his reading of literature. Therefore it is the teacher's responsibility to guide the reader in developing and using the appropriate, most relevant schema available to aid in word processing. The teacher must help the reader to organize information.

But what happens when established knowledge structures are not adequate? It is then that readers may require transitional information to narrow the gap between the novel material and appropriate cognitive structures. The reading instructor must provide this transitional information for the student. Consequently, one of the

very important directives for the teacher is that he ensure that students are familiar with the conventions of reading. Knowledge of these conventions helps guide a reader's perceptions and expectations; in fact, this knowledge helps in the transition between novel material and established schemata.

Through the experience of reading and hearing many stories, students acquire a set of expectations which serve as a guide as they organize story information. These are somewhat like slots that they fill as they listen or read. These expectations are sometimes called a "story schema". A "story grammar" attempts to describe this story schema (Sadow, 1982).

Such a story schema or internal cognitive structure is used for information processing. McConaughy (1982) suggests that a story schema describes an internal organization which readers and listeners bring to a story text. These readers seem to have an idea of what a story is and what types of information should be included before they are presented with a specific selection. A cognitive schema sets up expectations for what is coming next and operates in the reconstructing of story information during recall. Significantly, the story schema also determines which information is considered most important by the reader or listener.

Readers need to look for structure in a text. They need to incorporate these information units into their own

story schema. The instructor must fill in the gaps in the reader's knowledge and ensure that students integrate the text into their own schema, using structures in the text to help organize information. Therefore readers must have an ability to perceive this structure in the text which in turn depends both on their familiarity with the ideas in the text and how the present structure serves to highlight these ideas (Beach and Appleman, 1984).

Knowledge of literary genre conventions and text structure do influence how readers understand and remember narratives. Consequently there is a responsibility to provide students with this organizational information or schema to enable them to process stories and achieve a high level of the understanding of narrative. As Rand (1984) says:

The schema helps the reader attend to certain aspects of the incoming material while keeping track of what has gone on before. The schema lets the reader know when a part of the story is complete and can be stored in memory, or whether the information should be held until more is added. (p. 377)

To put it simply, the reading instructor must see to it that the reader acquires particular genre competencies. As students acquire knowledge of these literary conventions from their reading and sensing experiences, they improve in their ability to structure narratives about a central goal, intention, or problem (Beach and Appleman, 1984).

This process of determining the central story problem is most significant to a schema-theoretical view of

literature. When the instructor models the process of determining the central story problem, he shows students how to employ a strategy that fits countless stories. He also demonstrates a model of reading based on verifying or modifying a hypothesis. Thus students see that there may be other possibilities, but these alternative ideas can be used only if they fit the printed message in some reasonable way. In essence this is modeling an interactive view of reading (Moldofsky, 1983).

To continue, we come back to the role of the reader's knowledge base operating in reading comprehension. As Schank (1982) sees it: "One of the very important tasks of the reading instructor is to assess what a child currently knows so that he can build upon it" (p. 12). This writer suggests that the key issue in comprehension is the application of appropriate knowledge to a situation. Such knowledge is used to help fill in the details behind that situation. It is true, however, that readers cannot be expected to understand stories if they lack the needed background knowledge. It is also true that readers can be taught to expand their background knowledge and thus extend what they can read.

One of the considerations that emerges from this research is that good readers probably utilize background knowledge differently from poor readers. Teachers must be aware of this difference and ultimately strive to ensure that the poorer reader utilizes background knowledge

properly. In this way even the poorer reader need not be satisfied with a piecemeal experience but will strive for that fit between the whole and the parts which is the ultimate goal of reading.

There are ways for the teacher to ensure that the poorer reader begins to utilize background knowledge properly. To do this the instructor must capitalize on the use of various pre-reading activities. Some of these have already been considered. There are many others whose importance is not negligible by any means. As Robinson and Schatzberg (1984) propose:

Prereading activities are instrumental in developing readiness for comprehension. Recent theoretical developments and research in schema theory and linguistics indicate that teachers should help students discover and organize concepts that will bring them closer to the concepts and linguistic style of the author. In other words, the teacher should try to help bridge the distance between the schemata of the student and the schemata of the writer. (pp. 234, 235)

The teacher needs to provide these organizers for the student. But the teacher must also see to it that these are attended to, for the process of organizing is very important in developing readiness to read. Actually, people seem naturally to impose various types of organization on incoming information. If teachers assist this ability to organize by helping students form categories prior to reading, their students will benefit greatly. They will be better prepared for a particular piece of reading and will also learn cognitive strategies

that they can apply to other reading. There are several instructional tools which have been suggested to help students develop the organizational schemata for the information to be learned. These include advance organizers, brainstorming, and structured overviews (Robinson and Schatzberg, 1984).

Such techniques can be valuable classroom activities that result in students becoming aware of information they already possess and gaining information that others possess. The creative and unobtrusive teacher can make great use of these instructional tools to help activate and develop the organizational schemata needed to aid in comprehension. Through their use he can bridge the gap between what students know and what they need to know to process a text. Certainly, the variety of ways in which these tools are used need be limited only by the creativity and flexibility of the individual teacher.

As well as these organizing techniques, the reading instructor can make use of other directive techniques and strategies in facilitating word processing. As Robinson and Schatzberg (1984) see it: "Helping students develop strategies for interacting with authors of texts and other materials available within and outside the school is the responsibility of every teacher" (p. 233). These directive techniques can work. They can be thought of as instructions to the reader to use part of one's knowledge about the world and knowledge about the text itself to

make sense out of the text and integrate it into a meaningful message. In this way comprehension recognition and recall can be improved (Nix, 1981).

When one considers directive techniques one must necessarily account for the role of perspective in the comprehension process. Perspective does play an important role. This has been verified in the literature. Consequently, teachers must remember that students do approach reading (indeed, all activities) from different perspectives. As Charon (1979) writes:

We might see things differently if we imagine that each one of the individuals (including the interviewer) comes to the situation with a different perspective, and therefore sees a different reality, and although some of these perspectives may be closer to "physical reality" than others, all of them probably capture at least one part of that reality, and none of them is able to capture the whole of it. (pp. 2, 3)

Although it is true that perspectives are what enable a student to make sense of his world, they, in turn, can limit the understanding of the student. Thus the instructor should realize that perspectives must be judged by individuals as relatively helpful or useless in interpreting situations that arise (Charon, 1979).

Another point worthy of note is that perspectives are not set for life. The instructor can influence these guides to perception. As Charon (1979) says:

Any one individual is made up of several of these kinds of perspectives and may enter any one of them in a situation. Indeed, once in the situation, the individual can change perspectives or even find the initial

perspective being transformed as he or she interacts with others. (p. 9)

In actuality, this notion fits in so well with the ideas of schema theory that we can equate a perspective with a schema and the teacher's attempt to guide perspective as activating schemata to cope with situations to be encountered.

As well as the ones already explored there are other strategies that teachers can use to guide students in adequately interpreting the material they read. One of these instructional tools involves the writing experience. Writing can be used for assessment purposes, but writing can also be used to enrich content area reading. Teachers should consider using writing tasks to help students perceive the structure of texts (Sanacore, 1983).

A note of caution is in order here. This must be a process oriented approach to writing in which synthesis is the main objective. Students will not benefit from fragmented writing. Rather, the teacher would be well advised to use strategies which develop writing skills and increase students' potential for understanding their own and other people's writing.

Most teachers are aware of strategies available to direct the writing experiences of students. These include using story structure instruction which involves a writing component for the purposes of enriching reading.

It is clear that there is a need for a writing component in the reader-response view of literature.

Again, teachers would do well to remember that the methods used can foster students' reading through a variety of ways. Such methods will differ with the individual instructor. The most important cue here is that these experiences not be piecemeal. They must work well with the notions of a schema-theoretical approach to reading in which there is a strong connection between both reading and writing.

Another very important instructional tool available to the reading instructor is the use of questioning strategies to enhance reading. We, as educators, must recognize the powerful influence of questioning; we can no longer consider our questions in isolation from the reader and the text. As Hunkins (1976) writes:

The question is an integral, if not the integral, component in processing information. Regardless of whether a teacher is functioning inductively or deductively with data, he or she needs to generate questions. And the questions that are created and the manner in which they are phrased and sequenced influences the quality, the significance, and the accuracy of the learner's conclusions and what is done with those conclusions. (p. xx)

The importance of the question cannot be denied. Indeed it is vital to all process models, since without the question there is no processing of information. It is the question that centers the person's attention upon some topic; it is the question that enables data processing; it is the question that determines whether a conclusion is justified or not. To put it simply, in the absence of the question there is an absence of learning (Hunkins, 1976).

The instructor can use the question to assist students in processing information. Through its use he can focus student functioning and provide a means for distinguishing relevant from irrelevant information. As well, the question can point up major relationships among information bits, create new insights, and serve to assess the results of inquiry. Meaningful questions and questioning which is couched in student activities will enable students to gain understanding of their affective reactions to learning (Hunkins, 1976).

It is important that questions not be isolated from the experience of the students. In a schema-theoretical approach to reader response the experiencing by the student is all-important. Therefore questions should occur within a schema which allows for the knowledge of the reader. Those questions commonly associated with classroom reading assignments do more than provide focus. They promote different interactions between the information suggested by the text and the reader's existing knowledge. In turn, this can result in differences in the nature of students' learning (Wixson, 1983).

Consequently, instead of basing questions so as to elicit the "right meaning", teachers must structure them to fit the experience for the reader - indeed, for each individual reader. What is involved here is the notion of the schema-based question in which the question is

derivable from the text. However, the anticipated answer is neither implied nor explicitly represented by the text. Rather, the reader provides a response that emanates from the relevant schemata activated by the reader-text integration. In this way a reader's knowledge base is affected by the questioning process as he is provided with an additional opportunity to interact with the textual information. The integration of old and new information occurring during this interaction may well result in an adjustment in the reader's existing schematic state. The exact nature of this modification of the reader's existing knowledge is determined by the manner in which he processes the textual information while answering the question. In this way learning can take place (Wixson, 1983).

The question can be used as an organizer, a device to help students organize their thinking to achieve their objectives. As students ask questions while dealing with various learning situations they provide themselves with data or an awareness of deficits in data. This type of knowledge is essential if students are to assume major roles in their learning (Hunkins, 1972). We note here that questions generated by both teachers and students are of concern to us. Both types of questioning strategies will greatly enhance the comprehension of material to be read and will definitely stimulate cognitive growth.

There is a clear need to ask questions prior to reading in order both to organize information and to set up expectations about the material to be read. Yet the asking of questions beforehand does not eliminate the need for posing questions subsequent to reading the text. Indeed, such questions can induce readers to process information much more thoroughly. The key point is that both of these questioning strategies can be valuable learning tools in the processing of text.

It remains that the reading instructor needs to be aware of questioning strategies which involve students in learning. This theoretical knowledge can be applied to reading strategies in practical ways including kinds and numbers of questions to be utilized, yet awareness of the need is the first step. As Hunkins (1976) writes:

Student involvement is crucial, and the asking of questions is central to this involvement, not just when something is not clear, but in actual dealing with information. The processing of information has a planning stage, a doing stage, and an evaluative or feedback stage. Learners must participate in all of these stages, and, their engagement requires asking questions. (p. 4)

Assessment and evaluation are other important areas of teaching reading comprehension which deserve to be investigated. In practice, these seem to present the most problems for the teacher of reading. Exactly how does one go about evaluating students if there are no "right answers"? This is a lament heard quite often. As well, other questions spring to mind. For example, what does this theory do to the notion of using standardized reading

tests to measure comprehension? And how does the instructor reconcile the belief that the guidebook answer provided is not necessarily the correct answer, indeed not necessarily the only acceptable answer?

The replies to these questions in terms of reader response theory are often received with doubt and uncertainty because of already accepted methodology which does not fully support these notions. Yet it is true that the student must be assessed in some manner. It is also true that schema theory is not incompatible with this need. Actually it does provide direction and guidance for the teacher of reading who also must assess and evaluate.

Perhaps the teacher should first of all recognize that assessment must be carefully planned to coincide with the theoretical framework provided. What is the benefit to the student of literature if the instructor approaches his subject from these theoretical concepts and then in the end assesses the reader using methods which are no longer acceptable? Assessment must be compatible with the process utilized. As Robinson and Schatzberg (1984) demonstrate, "Methods and purpose in assessment must be closely aligned; that is, the method of measuring comprehension should be carefully planned in relation to the original purposes set for reading" (p. 248). This need for planning so that there is an alignment with original purpose has important ramifications for the type of assessment methodology utilized. For example, this

suggests that students should not be asked to answer questions that they could not have predicted in the original plan for reading.

Essentially, all this means is that evaluation should be comprehensive. As Farr and Wolf (1984) point out:

Oftentimes evaluation concerns itself with only one aspect of a reading program, usually the aspect that lends itself most readily to some available assessment strategy, or existing measurement device. The process has a context-stripping effect, that is, studying something in isolation from the context in which it exists. We maintain there is no meaning other than meaning in context, and therefore it is essential that an evaluation effort be a broad and comprehensive one (p. 275).

All too often, evaluation is not comprehensive. Many times it is limited to one type of assessment which does not elicit an awareness of the overall picture. For example, instructors often use tests as the only means of evaluating. Certainly tests are useful, but they are only one means of gathering information about the multiple aspects of reading. It is clear that in light of schema theory findings, instructors need to be wary of using any one test as the sole instrument of evaluation.

This applies as well to the use of standardized reading tests to assess comprehension. Cullinan and Harwood (1983) speak firmly against such usage. From their findings, based on the premise that reading is not a search for one right meaning, they conclude:

Comprehension tests that assume one right answer give an inadequate picture of a reader's comprehension. Furthermore, comprehension needs to be looked at as a process rather than a

product. Since comprehension is a complex phenomenon, it must be studied in a way appropriate to the phenomenon. We can no longer study just the reader or the text. We must examine the interaction between the two. (p. 37)

This, of course, is research which disallows any complete trust in the efficacy of standardized reading tests as the only means which can be used for assessing students' reading.

The overall purpose of assessment should be to facilitate reading comprehension. To do this there are a variety of techniques available to the reading instructor. However, in order for them to be successful they must be incorporated into the notions of the theoretical framework of schema theory. In this area, as in all other areas of reading, the enterprising teacher can and will meet the challenges of reader response theory. To conclude, the key point to remember always is that the notions of schema theory do provide a viable alternative in the teaching of reading comprehension. When we, as teachers, can accept these ideas and utilize them in our classrooms then reading comprehension can only be facilitated. Who knows? In the end, the teacher might make a difference.

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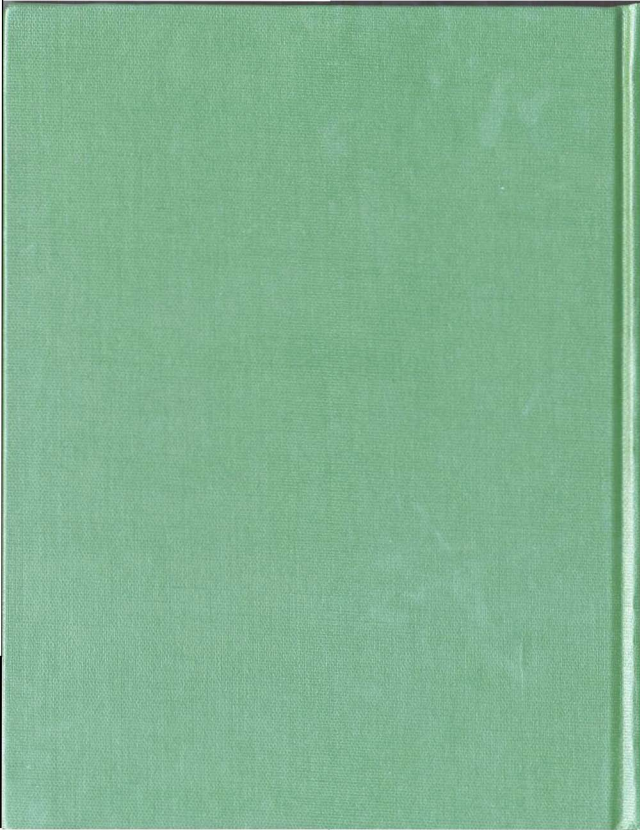
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SCHEMA THEORY AND THE TEACHING
OF LITERATURE

CENTRE FOR NEWFOUNDLAND STUDIES

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MARY DOYLE



SCHEMA THEORY AND THE TEACHING OF LITERATURE

by



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A Thesis submitted in partial fulfillment
of the requirements for the degree of
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Faculty of Education
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Be worthy your work if you love it;
The king should be fit for the crown;
Stand high as your art, or above it,
And make us look up and not down.

Ella Wheeler Wilcox, "The Actor",
Poems of Pleasure & Passion, 1908

Abstract

In view of the fact that literature does maintain an important position in the school curriculum, we must be concerned with how people read and interpret literature. We must accept that the teaching of reading is vital to the process of interpreting literary texts. Therefore, it is the purpose of this thesis to propose that a schema-theoretical view of reading is a viable approach to the teaching of comprehension. It is the further purpose of this thesis to examine such a process-oriented approach in which the notion of the text and the reader as partners in the reading process is of central concern.

Believers in reader-response criticism posit that when readers encounter texts they use previously acquired background knowledge together with the author's cues, to create meaning. Reading is an interactive process in which we must consider both text and reader. To this end, there will be supplied an examination of how these two interact in reading comprehension - an exploration of specific aspects of reader response.

Overall, a schema-theoretical view of the composing process requires us to modify many of our traditional views of reading comprehension. Some implications of such modifications are presented and some practical suggestions for improving the teaching of literature are provided. Thus the major purpose of this work is to facilitate reading comprehension.

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Thank you Kay.

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CHAPTER I

THE NATURE OF LITERATURE

The Question of Definition

In pursuing any research in the field of the interpreting of literature, one must first address that "grand old question" which has challenged writers seemingly forever. What is literature? It is true that from the time of Aristotle man has tried to reduce the discipline of literature to terms of one tidy sentence. Many of these definitions represent the appeal of a particular time, place, and need. On the other hand, the word has frequently been used to refer to anything in print, without qualifications of any sort. The Oxford English Dictionary (1933) includes the following: "the body of writings produced in a particular country or period, or in the world in general". This definition is, of course, quite general. By its very nature it does not speak to all of our concerns regarding literature. Wellek and Warren (1977) summarize the situation quite succinctly when they write:

The first problem to confront us is, obviously, the subject matter of literary scholarship. What is literature? What is not literature? What is the nature of literature? Simple as such questions sound, they are rarely answered clearly. (p. 20)

Even given the evidence of centuries of thought, there has never been offered any simple, precise, clear,

and lasting definition of literature. Indeed the lack of a formalized position - an all-encompassing statement - has been the one obvious, salient point made apparent in recent writings. Hernadi (1978) cites various prominent researchers such as E.D. Hirsch, Jr. (1978), Davenport (1978), Altieri (1978), and Peckham (1978) who corroborate this notion that there have been many conflicting opinions regarding the nature of literature. These same writers, however, posit that one does not indeed need a formal definition of the word. For these people, the exercise in definition is unnecessary, since the term literature lends itself largely to common sense understanding. Consequently, to explore the notion of defining literature is largely futile as we succeed only in narrowing our responses to literature. Indeed, any definition we might propose would quite probably eventually be noted for its instability.

This lack of a single comprehensive definition need not worry us unduly. Altieri (1978) explains that there really is no need for a formal definition of literature, simply because though we do not as yet have such a statement, we obviously can enjoy literary works and react to them intelligently.

The Need to Study Literature

Accepting the notion that the question of definition of the discipline is elusive but ongoing, one may be better advised to explore the realm of literature in terms of worthwhileness. Why study literature in the first place? What do literary works offer students? Why teach literature in the schools? These questions too, have been addressed repeatedly in both aesthetic and practical terms. Many writers assume that literary works do have value and that this is actually self-evident (e.g., Woodberry, 1969; Margolies, 1969; McMaster, 1977; McFadden, 1978). For these and numerous other researchers the world of literature is an exciting realm of possibility. Indeed, very few people would argue that literary works are valueless. Rather, one sees that the worth of literature is inherent in the works, that literature, along with being the foremost of the humanities is something of continual importance in man's life. As McMaster (1977) suggests, "Literature is a splendid laboratory" (p. 9).

Literature does maintain an important position in the school curriculum. All too often, writers have espoused traditional roles for literature in lofty and high sounding phrases. These leave us with vague and abstract generalities of the aesthetic pleasure in reading. On the other hand, literature has too often been regarded in purely functional terms. This leaves us short of any

aesthetic satisfactions. / Thus we face a dilemma. As Woodberry (1969) informs us, "Excess of instruction leads to one's being bored; excess of pleasure leads to frivolity" (p. 172).

So what does literature offer students beyond the traditional aims of instructing and entertaining? McMaster (1977) considers that "the benefits of literary culture are not obscure: they are intellectual, moral and aesthetic" (p. 4). This confirms the hypothesis that the value of literary works becomes three-dimensional: didactic, aesthetic, and heuristic. For the well-rounded student, literature should convey all of these notions. At this juncture it may be pertinent to examine briefly each of these aspects.

Didacticism has been a major part of literature for quite a long time, probably since the inception of the subject. John Rowe Townsend (1980) notes that "the urge to instruct the young is deeply built into human nature" (p. 56). Much of the literature of earlier centuries is quite didactic and moralistic in its intent and purpose. It aims to teach lessons, to moralize, to categorize how life should be lived. This has been demonstrated by authors such as Peacock (1972), Montgomery (1979), and Parr (1982) who see that literature both expresses moral doctrine and makes it believable. Thus it enables students to consider difficult moral problems that they may not have been aware of or indeed may have chosen to

ignore. The historical background of this didacticism stems from the Victorian and Edwardian view of literature. During these times, literature was seen solely "as an instrument of knowledge and wisdom, with the function of edification" (Peacock, 1972, p. 24).

This aim to teach is still very much a presence in literature today. The difference is that other considerations have surfaced, pushing the intent to edify somewhat to the background. In general, society no longer allows such conventional moral didacticism and narrow Victorian morality. Peacock (1972) suggests that "what we are really faced with is not disappearance, but mutation of the moral factor in assessing the significance of literature" (pp. 33, 34).

The aesthetic value of literature is not to be denied. Rosenheim (1980) informs us that "the primacy of pleasure as an end in reading is now quite widely accepted" (p. 40). The very nature of literature provides a forum for enjoyment. Who can dispute the power of words to move us, to arouse deep emotion, to engender fear, joy, passion, commitment, anger, and contentment? Discussion of the aesthetic appeal of literature is almost redundant in the sense that one has only to read a good book to realize its potential for entertainment and pleasure.

Enjoyment is an integral part of reading. Many take this for granted when they speak of the value of literature. Yet various researchers attest to the truth

of the notion that literature does yield pleasure to the reader, that literature does engender sensation and emotion, that literature does perform as an aesthetic object, capable of arousing aesthetic experience (e.g., Woodberry, 1969; Wellek and Warren, 1977).

At one time the pleasure of literature was minimal, if not non-existent, as emphasis was placed on "knowledge and virtue" (McMaster, 1977, p. 16). Then the merits of the aesthetic appeal of literature became the central focus. To reiterate, however, these two traditional functions - to instruct and to entertain - are worthy features of literary works but they do not cover the entire spectrum of literary value.

We come to the third dimension, which concerns the heuristic worth of literature. This area is of vital concern to educators today. It is here that we address the notion of literature for life values - we see that we read literature for where it will lead us, for its meaning in life. Wimsatt (1976) suggests that literature deals with real life, with promoting values for living.

The notion that literature deals in real-life truths is of great concern to many writers in the field. Indeed, in recent times, researchers in reading theory have taken great care to discuss this aspect of literature - to consider the presence of human truths as a vital component of any acceptable literary work. Some of these include Woodberry (1969), McMaster (1977), Taylor (1981), Parr

(1982), and Beach and Appleman (1984) who suggest that a work of literature is a direct presentation of selected experiences which enable us to recognize truths about our existence. This is done through involving us in the problems of being human and directing our responses to these difficulties. Literature deals with life, real human situations, complex human dramas, and responsible human responses. Consequently, students see the opportunity for mature, intelligent, moral choice in their own lives. As Parr (1982) puts it, "Literature gives life to the problems of being human" (p. 19).

We assume that in order for a piece of literature to be worthwhile it must contain some kind of message which will involve the reader in developing or acquiring values and meaning in his own life. As Beach and Appleman (1984) clearly state: "Literary texts often remind us of our own humanity" (p. 129), in a world where human events are often reduced to impersonal, scientific, technological reports. Literature allows us to confront such matters as consciousness, freedom, and choice.

Readers learn to develop insights about their own lives. This is accomplished through discovering and sharing in another person's ideas or model of the world. From these representations we learn to recognize statements about the world and people's responses to it. We come to see something about the world. We come to see

something about how we think and about how others think.

This is confirmed by Woodberry (1969) who claims that:

Literature is a key to one's own heart; it is also a key to the lives of others; there are other ways of learning one's own nature and human nature in general, but outside of direct experience and observation literature is the principal means of obtaining knowledge of human life. (p. 172)

Through literature we are able to discover our own potential. This is done via the representations of other people's situations and scenarios (McMaster, 1977). As we study literature we expand our own unique and personal lives by becoming critically aware of the great variety of human responses available to us.

Thus the main role of the literary text is somehow to bridge the gap between the experiences of the reader and those of the writer - to put the reader into touch with the author's model of how things are. In this way, writing can shed light on values, commitments, and convictions of society in general and help in the formation of a reader's own beliefs. Literature "bears witness to" or illuminates man's capacity to hold on to true ideals for living, to hold on to the human goals we must never forget. Hence literature should discourage moral apathy, should make students aware of the larger community, and should encourage empathy between the members of that community in exploring life's dilemmas.

Parr (1982) summarizes beautifully the heuristic value in literary works when she writes:

9

I hope that by exploring the power of values and the complexities of moral choice within the literature they read, students will be better able to recognize and understand the possibilities for responsible action and self-realization within their own lives. I also hope that by seeing themselves as part of a rich, ongoing culture they will decide that moral choice is not only desirable but also possible within their own worlds. (p. 19)

Suffice it to say that literature does inform and entertain but that literature also does promote values. In the end, literature should foster the growth of responsible human agents structuring their own lives while they share commitments within the human community.

From this it is obvious that we have to agree with Gibson and Hall (1969) who recognize a three-dimensional approach to reading. For them the purposes of reading are: "to inform and be informed; to modify behavior, including the development of social understanding; and to secure pleasure and satisfy curiosity" (p. 22). This, then, is why people are taught to read.

CHAPTER II
READER-RESPONSE CRITICISM

The Role of the Text

If literature is such a very important medium, and quite simply we do not doubt this, we necessarily must be concerned with how people respond to literature. As public school teachers we must be even more conscientious in attending to the notions of literary response. And as concerned teachers of English we cannot inflict literature on our children without some conception of the way in which the reading process works.

Perhaps the first step would be to take a critical look at the role of the text in reading. For quite a long time it was assumed that writing contained a hidden message which the reader should find. Indeed, this was the traditional stance of the literary critic and literary criticism in which the text held the one "right" answer. Meaning was assigned to a piece of writing and students were required to find this meaning. Literature was seen to consist of texts and students could not respond to the material on their own terms. Rather, their answers were supposed to correspond with those of the critic.

The consequence of this approach was that students were encouraged to practice reading, by this to perfect their skills in finding the proper answer in a text much

as one would master fractions or sentence diagramming or any other learned operation. Many students were "turned off" by literature and the unfortunate truth was that oftentimes literary works were perceived to have little or no value. As Harste and Mikulecky (1984) point out:

When literacy is viewed as a perfectible skill as opposed to a functional vehicle of thought that is part of a social context, many of the benefits of literacy are lost not only for the individual, but also for society. (p. 73)

Yet this has been a standard approach to the study of literary works. Because of it our schools may be producing generations of literary critics. Our students are not permitted to respond to literary works. They have learned to recite and to regurgitate fixed ideas. But what happens to those students who encounter reading problems, who have difficulties in finding these assigned meanings, who cannot readily come up with the "right" answer? Obviously, if the individual responses of individual readers reacting to the text do not match preconceived notions they are considered to be wrong, to be even bizarre. In the final analysis, readers are forced to become paraphrasers of content.

This approach is in direct contrast with the conclusions of recent writers. One of these, Sadow (1982), sees that one cannot read just what the text states; that indeed "the process of discourse comprehension is not simply a matter of grasping what is explicitly stated" (p. 521). Another researcher who

writes in support of this notion is Wixson (1983). She insists that comprehension of a text does not consist merely of reading the words therein but rather it must involve constructing a meaning between the information suggested by the text and that information provided by the comprehender's existing knowledge.

Where does the notion of textual objectivity - the text containing a message which the reader must find - leave those of us who recognize the great variation in interpretation among student responses? Where does such an approach leave theorists who account for the human agent in the reading process? Consider the words of Bruns (1982), who firmly believes that "meanings in literary criticism (as in daily life) need to be replenished not fixed" (p. 3).

Clearly, this so-called "New Criticism" - which cites the text as the only source of meaning and disregards the presence of a human agent constructing meaning - does not allow for the obvious fact that different students might well interpret the same piece of writing in differing ways, and, indeed, the same student perceives the same piece of literature differently at different times. Consequently, writers in recent years have firmly discarded such a view of literary study. Many agree with McGilchrist (1982), who argues that "the critic has nothing to add to the work of art. He offers the reader nothing but what is already there. The reader's

perceptions and understanding come from within him, and are his own" (p. 6V).

Although this approach, which ignores the interaction of text and reader, may well be continuing in our schools today, fortunately such a view of literature no longer appears to be the only one. Seung (1982) shares some thoughts on this issue. He notes that the central premise for the development of this "New Criticism" has been the notion of textual objectivity. But he warns that during the past decade, the champions of reader-response criticism have been mounting a rising critique against such a premise. Further to this, Seung's own postulate is that "every text is no more than a blank tablet unless and until it is interpreted in a proper context of signification" (p. 10).

The believers in reader-response criticism as a viable approach to the study of literary works do not suggest that the text is unimportant in the process of reading. Yet they strongly advocate that the text alone cannot be the sole source of authority. If this were the case, they posit, then what would account for the variability of interpretation by readers? Various writers do allow for the truth of this notion that readers differ in their interpretations of literary material (e.g., Holland, 1975; Tyler, 1978). Holland (1975) reminds us that from his own experience as a critic and teacher he knows that readers can diverge markedly in the

interpretations they assign to a text. And Tyler (1978) corroborates this statement when he writes that every text is an immanent structure for its own interpretation but depends upon the reader for a framework of interpretation in which the text is rendered reasonable by the actions of its agents - the readers. He goes on to say that "the constitution of the text as a whole then is perspectival and open - it has more than one interpretation, and necessarily so" (p. 378).

Indeed the concern for individual responses in reading has been with us for quite some time. The pertinent literature reveals the ideas of many researchers who speak to this notion. Included among these are Swabey (1961) and Goodman (1984) who see that the reader's insight is of prime importance in the act of reading. Because of this we react to material in differing ways. Goodman (1984) elaborates further when he tells us:

The answer is that the reader is constructing a text parallel and closely related to the published text. It becomes a different text for each reader. The reader's text involves inferences, references, and coreferences based on schemata that the reader brings to the text. And it is this reader's text which the reader comprehends and on which any reader's later account of what is read is based. (p. 97)

Thus the text is read by a reader; it exists and finds its being through that reader. This notion of the text and the reader as partners in the reading process is central to the reader-response criticism which is our concern in this paper. McFadden (1978) supports this

contention when he shows that the source of being in any literary work is twofold, in that it takes place in the creative consciousness of a reader and the physical foundation of the text. But he does not stop there. He goes on to present a third and fourth dimension where a text is intersubjectively available to a community of readers and finds its completeness in a schematic aspect where it requires filling out by readers.

Consequently we have the notion that the text is important - but important only insofar as it suggests information to the reader by way of its structure of knowledge. It is not a fixed object which contains identical meaning for all, as the champions of textual objectivity would have us believe. In point of fact, many recent writers such as Iser (1978), Scholes (1978), Holland (1975), and Tierney and Pearson (1983) take great pains to reject the concept of textual objectivity. These authors see that a work of literature does not offer us a detachable message, that meaning cannot be reduced to a 'thing' - since, of course, it is a word and not a thing. Further to this they see that the materials in a text simply provide ways for readers to respond, that the readers compose meaning when they encounter literary texts. As Tierney and Pearson (1983) suggest, "There is no meaning on the page until a reader decides there is" (p. 569).

We recognize that the text is merely the groundwork for interpretation. It is not made complete until the reader brings meaning to bear on the information existing in the text. Brown and Lyman (1978) show that the text is not a fixed object or entity, because "the interpretation itself becomes part of the symbol just as an interpretation of a poem becomes on the next reading, a part of what the poem says" (p. 47). Kintsch and Yarbrough (1982) speak to this notion as well when they propose the idea of the inadequacy of textual objectivity alone to ensure correct comprehension. They state: "It is clearly false to assume that comprehension is an ability that can be measured once and for all, if only we had the right test" (p. 834). This could be extended further and the assumption could be made that the nature of comprehension is such that it could never be measured concisely. Different readers bring different meanings to bear and consequently interpret a text differently. Literary response must therefore necessarily involve more than the text itself; the "right test" can thus never be.

It is obvious that in reader-response criticism there exists a clear relationship - an interaction - between text and reader. As human agents assembling meaning students must convert the text into meaning in their own lives. Various researchers have explored this relationship to some degree or other (e.g., Rivers, 1978; Krieger, 1978; McCanles, 1978). They propose ideas in

which texts are seen as disembodied language and the readers are the performers who re-enact these texts. Thus the works exist for us only because we experience them: We "treat" the texts. In this act of "treating" the text we may or may not consider the signals placed by the author in the text, when we respond to literature. However, in order to avoid a purely idiosyncratic interpretation, the reader has to consider the signals provided by the author. Indeed a basic premise of reader-response criticism is that there must be an interaction between text and reader.

In view of these notions, the reader is seen as the one who completes the text. Writing itself is not complete without the intervention of the reader. Indeed this premise is apparently true in general when people encounter information of any sort. Oatley (1978) takes the position that when people are confronted with material - and in this instance we may construe material as any literary text - they try to make sense of it and the likelihood is that people translate the material into their own representations or schemata of the world. Carrell (1983) further acknowledges that "the reader is viewed as being at least as important as the text, in which reading comprehension is taken to be the reader's construction of meaning from the text" (p. 200). Finally, as Storr (1969) puts it, "There has to be a lock within us which the key of the book can fit, and if it does not fit, the book is meaningless to us" (p. 98).

The Presence of the Reader

There is research to support our contention that the text is not a fixed entity subject to the interpretation merely of the literary critic. Ultimately, the reader is at least just as important as the text in a dialectical process of assembling meaning. For many theorists the reader has replaced the text as the central figure in the process of reading. At this point then it may be wise to consider how the presence of a reader can affect the meaning of a text.

We are quite sure that man does not operate in a vacuum. Instead, we believe that the human agent does play a significant role in structuring meaning. Not all researchers have supported this notion. One can consider the world of scientism, for example. As believers in reader response theory we must reject pure scientism. Wayne Booth (1974) sees the ideals of scientism as being dogmatic:

The goal of all thought and argument is to emulate the purity and objectivity and vigor of science, in order to protect oneself from the errors that passion and desire and metaphor and authority and all the logical fallacies lead us into. (p. 88)

This view is impossible, we accept, in interpreting literature. We cannot regard knowing in such a rigorously scientific manner. Rather, we must reject the purely "objective" interpretation of the text and attend to the notion that man is the agent responsible for meaning.

Accepting the concept that every man does assemble meaning in his own world, we assert the belief that by his very nature man is not an objective creature. As Poole (1972) tells us, objective argument is not only impossible but "what is accepted as true is accepted as true because of an already existing structure of belief in the individual, an existing structure of interest or fear". (p. 121).

The phenomenologists lead us even deeper into the exploring of this subjectively constituted world as the plausible alternative to rigorous objective knowing. Researchers such as Kelly (1955), L. Hudson (1975), Matson (1976), and T. Hudson (1982) see that life is biased in that human agents construct their own worlds. As early as 1955 Kelly was aware of this when he wrote:

Life is characterized, not merely by its abstractability along a time line, but more particularly by the capacity of the living thing to represent its environment. Especially is this true of man, who builds construction systems through which to view the real world. The construction systems are also real, though they may be biased in their representation. Thus, both nature and human nature are phenomenologically existent. (p. 43)

For these theorists the presence of the human actors - through their thoughts, beliefs, and values - is of prime importance in all human activities. Indeed the human actors perform an "intrinsic and irreducible role" (Matson, 1976, p. 6) in constructing meaning. From this we see that the reader is an agent structuring his world as he actively predicts, selects, and confirms. The

reader brings meaning to bear and constructs meaning from the text. Thus there is very clear evidence that the reader acts in the process of comprehending any text.

By its very nature, language (and literature) is an open system which goes beyond science to predicate existence or to bring into being in language. In view of this, one must further insist that in every case a person brings certain meaning to bear in any experience. Various researchers have attended to the notion of the personalizing creative nature of literature. These include Holland (1975) and Iser (1978). Holland (1975) tells us that "each act of reading is constructive. It makes something new, something human, something personal" (p. 122). Iser (1978) also supports the idea of self-actualization when he suggests that "the reader's communication with the text is a dynamic process of self-correction as he formulates signifieds which he must then continually modify" (p. 67). The views of these and other thinkers make the observer (at least in part) of prime importance in the act of observing - in our case in the act of responding to a text.

The concept of the personal emanation of the personal being may explain to some extent why individuals can react to the same situation (literary text) in different ways - can read the same poem and have differing responses. It is this notion which produces what McFadden (1978) speaks of as a community of readers who "will possess varying

abilities to respond aesthetically or 'fill out' a literary work of art of whatever quality" (p. 50). This belief is corroborated by Brown and Steinmann (1978) and Holland (1978), who suggest that, in discourse what one reader counts as literary, another reader may not. Hence it is clear that different people, when they look literarily, will look for different things which will express their own personalities.

In literature we have writers accounting for their ideas of how the world is by writing accounts of how things and events seem to them. In this way, their models are cast into language form and readers bring their own meanings to bear on this material. Therefore, also in literature, we have readers accounting for or constructing their own notions of what is there from their personalized perceptions. These identifications of the patterns are necessarily open-ended. They can be corroborated or refuted in the interaction continuing between text and reader.

Feibleman (1976) attests to the notion that man reacts to the world but that this reaction is open-ended. He suggests clearly:

Man reacts to the world in accordance with what he knows about the world, and in accordance with the reactions he makes, what he knows about the world also changes. New instruments make possible new observations, and new observations suggest still further modifications in the instruments. Thus philosophies are enlarged to include new information or exchanged for more efficient ones. (p. 112)

The process of reading is necessarily open-ended. Readers are seen as filling in gaps as they hypothesize and predict what will be on a particular page or indeed what will be in the next sentence (Cullinan and Harwood, 1983).

In view of these conclusions we must once again suggest that the book is constantly being assembled by the reader. The evidence to support this belief in recent times has been considerable (e.g., Holland, 1975; Krieger, 1978; Iser, 1978; Carrell, 1983; Brooks and Dansereau, 1983). It is clear that the reader must construct the text out of the sequential patterns given him, that a description of the reading process must bring to light the operations activated in the reader by the text, and that meaning is constructed out of the interaction between the material in the text and a reader's background knowledge. Thus the experience of the reader and the context of the situation interact to influence how a reader interprets and recalls new information. Essentially, in carrying out the instruction of the text, the reader assembles the meaning of the text. As Holland (1975) assures us, "The work finds its fulfillment, so to speak, when a reader gives it life by re-creating the work in his own mind" (p. 13).

Reading is an interactive process. We must consider the text. We must consider the reader. It is the purpose of this present inquiry to try to explain how these two interact in reading comprehension - to look at specific aspects of reader response.

CHAPTER III

A SCHEMA - THEORETICAL VIEW OF READING

Patterns and Patterning

The evidence presented thus far points not only towards the view that reading involves merely the reader's constructing of meaning. Rather, the reading process is seen as an interactive (or "transactive") process between text and reader. The response (or "interpretation") is based on both the expectations of the reader and the cues structured by the text. At this point it may be appropriate to consider briefly some aspects of such an interactive (transactive) process of reading.

Reading appears to proceed in two directions. It definitely does, not involve only the idiosyncratic interpretation of the reader. Likewise, one can rule out the belief that reading is entirely the consequence of textual objectivity. There is of necessity a clear relationship between the two. Both the presence and the depth of this relationship have been demonstrated firmly in the literature pertaining to the subject. One can begin with Holland (1978), who perceives of a literary transaction as proceeding in two directions: "from literant to text and from text to literant" (p. 15).

Other researchers and writers agree with this concept, although some see the process as interactive while others suggest that it is transactive in nature.

Included among these are E.D. Hirsch, Jr. (1976), Iser (1978), Carrell (1983), and Goodman (1984), who see that reading response involves a dialectic relationship between the interaction of the text and reader, hence that every act of interpretation involves two perspectives, that of the author and that of the interpreter. Carrell (1983) puts it simply: "Reading is an interactive process between the text and the reader" (p. 183), while Goodman (1984) allows that "reading involves a transaction between the published text and the reader" (p. 107). In any case, it is clear that reading involves both the cues contained in the text and the interpretation of the reader.

As we have seen previously, many researchers concur in the belief that in reading the human agent is an active participant in the comprehension process. In fact, these theorists demonstrate that during the reading process the comprehender constructs the text. One cannot stress too strongly the importance of the active role of the reader. Contrary to previously held notions in reading comprehension theory, the reader is not the passive recipient of information. Rather, he fulfills the text in light of earlier acquired knowledge and expectations of what is in the reading material. Holland (1975), and Tyler (1978) support this view when they see reading as the active recreation of the text based on the materials found in it. Thus meanings are seen as intersubjective accomplishments. Speakers and hearers negotiate, amend,

and reaffirm these accomplishments by communicating with one another. In keeping with this line of thinking, we can here identify the writer as the "speaker" in the act of communicating. Naturally, then, the reader is the "hearer". It follows that the reader recreates (in his own terms) the writer's perceptions of the world.

A text is seen as something to be completed by the reader. To repeat: it is not the sole source of authority reluctantly yielding up its message to those who can successfully recover this assigned meaning. What is actually true is that the text must be interpreted by the reader. As early as 1958 Ong expressed the following belief:

For a literary work to be what it really is, words must move in sequence, one after another in someone's consciousness. The work must be read or heard, recreated in terms of communication touching an existent person or persons over a stretch of time. (pp. 85, 86)

Other writers have added their thoughts to this view (e.g., McFadden, 1978; Ong, 1982; Goodman, 1984). These researchers see that in addition to the signs of the work itself and its potential, a person must carry out a particular fulfillment of that potential - a reading or concretization. Consequently a text is an object which must be appreciated and interpreted by its readers. Goodman (1984) provides a clear summary of this notion when he writes:

Most research is converging on the view that transactions between reader and text characteristics result in construction of

meaning. This view makes the role of the reader a highly active one. It makes what the reader brings to the text as important as the text itself in text comprehension. (pp. 96, 97)

The previous research, as cited, is simply pointing toward a schema - theoretical view of reading. Let us consider the nature of such a view of reading.

Robinson and Schatzberg (1984) show that "in the framework of schema theory, people are seen as actively seeking to organize ideas and information into orderly structures" (p. 235). This notion of organizing knowledge is essential in reader-response theory. As Adams and Collins (1977) suggest, for the first time the ideas of schema theory are powerful enough to explain the interactions involved in reading. What happens is that the words contained in the text evoke in the reader associated concepts, their past interrelationships, and their potential interrelationships. - It is the organization of the text which helps the reader to select among these conceptual complexes. Consequently, the goal of schema theory is "to specify the interface between the reader and the text - to specify how the reader's knowledge interacts and shapes the information on the page and to specify how that knowledge must be organized to support the interaction" (Adams and Collins, 1977, p. 4).

As people strive to organize their ideas and information into orderly structures, essentially they are forming patterns. Indeed, theories dealing with the notions of patterns and patterning are major concerns of

schema theory research. Kelly (1955) spoke quite clearly in attending to this aspect of man's knowing. He wrote:

Man looks at his world through transparent patterns or templates which he creates and then attempts to fit over the realities of which the world is composed. The fit is not always very good. Yet without such patterns the world appears to be such an undifferentiated homogeneity that man is unable to make any sense out of it. Even a poor fit is more helpful to him than nothing at all. (pp. 8, 9)

Thus for Kelly "experience is made up of the successive construing of events" (p. 73).

The concept of patterns and patterning (or "pattern formation") can be considered in light of the ongoing process of knowledge acquisition. The basic knowledge structures and the processing mechanisms of schema theory, indeed, are not unique to the reading process. Rather, these same knowledge structures and processes are assumed to underlie all cognitive processes. Consequently, schema theory provides a way of integrating one's understanding of text with one's understanding of the world in general (Adams and Collins, 1977).

It is clear that throughout our learning and development as intelligent knowledge-seeking human beings we constantly form, revise, and reform patterns of knowing. We see that our existence then is a result of this adaptive learning or knowing. Accordingly, we start off with a range of predictions and expectations which are brought about or diagrammed by the experience to which we have been subjected - in effect, we are cultural human

beings formed by bodies of knowledge we encounter through language as our essential medium of exposure to these conditions. Because of this cultural aspect, we, as language learners, acquire notions of how the world exists or patterns of how things are. We set up these representations based on the knowledge we have acquired through the experience we bring to an event plus the ways in which we have learnt to deal with things in our world. Essentially, when we encounter a new situation we already have preconceived notions of how to react or deal with the experience.

Various authors such as Kelly (1955), Monsarrat (1955), Feibleman (1976); and MacKay (1969) have discussed these ideas of pattern creation in our experiencing of the world. They see that patterns are ways of construing the world, that patterns enable man to chart a course of behavior, that patterns allow man to order knowledge, to fit it in as a belief among other beliefs. Humans form these patterns for action based on their experiences and observations as well as the recorded histories of events. Such acquired patterns or structures of belief make up a mental model of the world.

These previously acquired patterns are activated when we encounter new information. It follows that if our predictions and expectations serve to satisfy our ideas of how things exist in the new situation, then our patterns

are fulfilled. Our ways of knowing are seen as equivalent to the situation.

Yet these patterns do not always satisfy; the predictions and expectations are not always fulfilled. As Kelly (1955) says, these patterns are "tentatively tried on for size" (p. 9). They are made authentic by a process of selection, of acceptance, or rejection. Thus our readiness to match the pattern of events of perception by the pattern of our own internal or external reaction is a conditional readiness. The patterns must satisfy, must be consistent with other courses of behavior. If the patterns do not fulfill we must then do something to change our modes of representation to take in the new experience.

Consequently the preconceived patterns are subjected to further reconstrual. Kelly (1955) sees that these patterns or "constructs" "are used for predictions of things to come, and the world keeps rolling along and revealing these predictions to be either correct or misleading" (p. 14). The important point is that these are not fixed notions or patterns. All of our present interpretations are subject to the revision or replacement by alternative construction. Kelly (1955) summarizes quite succinctly:

The succession of events in the course of time continually subjects a person's construction system to a validation process. The constructions one places upon events are working hypotheses, which are about to be put to the test of experience. As one's anticipations or

hypotheses are successively revised in the light of the unfolding sequence of events, the construction system undergoes a progressive evolution. The person reconstrues. This is experience. The reconstruction of one's life is based upon just this kind of experience. (p. 72).

The universe is always open to reconstruction. This is validated by various researchers who see that man does reconstrue or add new patterns for knowing. He supplements his experience by forming new images or adding the experience of others to his own. Hence there is a gradual construction of a mental model of the external world (e.g., Monsarrat, 1955; MacKay, 1969).

To summarize, the individual has to modify or revise his perspective in light of new knowledge or patterns of knowing. He must consider other ways of dealing with what is there. This, then, is the whole basis for man as a constantly learning being. His pattern or model is forever being challenged and adapted in light of new knowledge, new situations, or new experiences. He must then find some other representation which restores order to his perceptions - which fulfills. This, in essence, is what keeps man learning. He has to refine his model of things. Basically, man is forced to adapt his schemata, to revise each schema - ideally, he becomes more and more sophisticated in this approach.

A 9

Definition of Terms in Schema Theory

Primarily we have a schema - theoretical view of all knowledge acquisition which necessarily includes reading and comprehension. In this view the writer constructs a text through transactions with the developing text and the meaning being expressed. During the process the text is transformed and so are the writer's schemata (ways of organizing knowledge). Likewise, the reader constructs a text through transactions with the published text and the reader's schemata are also transformed in the process (Goodman, 1984).

We see that the words schema and schemata are of central importance in the process being described. To understand more fully such an approach to reading we need to consider in detail exactly, what schemata are - how a schema is defined in a composing model of reading.

The Oxford English Dictionary (1933) defines a schema as "a diagrammatic representation" in which schemata are "any one of certain forms or rules of the productive 'imagination' through which the understanding is able to apply its 'categories' to the manifold of sense perception in the process of realizing knowledge or experience". To put it simply, a schema-theoretical view of reading is founded on a scheme or a methodical arrangement - a definite pattern or plan.

Many authors have attempted to define and illustrate the words schema and schemata. They speak variously of

frameworks of knowledge organized into patterns. Although the terminology may differ, the basic premises seem the same. Since the early days of schema theory, we have encountered such terms as "model", "plan", and, of course, "schema". Diverse authors employ such names as "constructs", "slots", "rules", "patterns", "frames", "scripts", "variables", "stereotypes", "themes", "beliefs", "presuppositions", "knowledge units", "macrostructures", "generic knowledge structures", "memory organization packages", and finally "schemata". The terms thus indeed do vary, but the processing mechanism apparently remains the same. For the purposes of consistency, this work shall mainly employ the terms schema-schemata in discussing a schema-theoretical approach to reading.

Kelly (1955) spoke of constructs.. He said specifically "Let us give the name constructs to these patterns that are tentatively tried on for size. They are ways of construing the world" (p. 9). In like manner other theorists, which include Bartlett (1932), Tyler (1978), Oatley (1978), and Rumelhart and Norman (1978) have examined and developed the notions of schema-schemata. For these authors the schemata make the world accessible to the individual. Each schema is therefore a representation which enables the individual to make sense of the world, an active organization of past reactions, or of past experiences, a general model of a situation made

up of active interrelated knowledge structures - namely, schemata.

These schemata, or active interrelated knowledge structures, are seen as being engaged in the comprehension of arriving information, guiding the execution of processing operations. Such action schemata constitute much of our knowledge of how to do things. Essentially, they are frameworks of knowledge into which we slot information or make corrections to the basic knowledge already present. Oatley (1978) speaks of schemata as being mental representations. He elaborates:

Schemata then are representations of knowledge more or less well fitted (so far as we can understand) to particular tasks. There are varieties of representations for any given task or arrangement of the environment, and perhaps in evolution, in learning and in cultural development, what goes on is the acquisition of more appropriate, more powerful schemata. (p. 146)

Schema theory intricately involves all knowledge acquisition. Carrell (1983) suggests that schemata are background knowledge structures which are activated when a person interprets new material. Thus schema theory is seen as the basis of a reasonable theory of human information processing. As Wixson (1983) sees it, "Schemata are hypothesized knowledge structures, abstract entities to which human information processors bind their experience with real-world phenomena" (p. 414). In this light, schemata are seen as units into which knowledge is packaged and schema theory attempts to depict just how

that knowledge is represented in the mind and furthermore how that representation influences the way in which the knowledge is used (Cullinan and Harwood, 1983).

Schemata are generic knowledge units which together form a plan or pattern of experience. Smith (1982) affirms that in cognitive schema theory, schemata are generalized rules derived from experience which allow people to anticipate, interpret, explain, and act upon information about the self and the environment. Goetz, Reynolds, Schallert, and Radin (1983) also regard schemata as existing knowledge structures which together make up a model or schema based on prior experience but which also consist of slots into which new information is assimilated. This schema then is a pattern of action but is also a pattern for action.

Many other researchers and theorists also share in the notion that schemata are generic knowledge structures guiding the processing of information. These include: Norman and Rumelhart (1975), Bobrow and Norman (1975), Feibleman (1976), Adams and Collins (1977), Rumelhart (1979), Pylyshyn (1979), Fisher (1981), Eckblad (1981), Graesser and Nakamura (1982), Kintsch and Yarbrogh (1982), Landis (1982), Scarborough (1982), Pearson (1982), Schank (1982), Dean (1983), Freebody and Anderson (1983), Sanacore (1983), Beach and Appleman (1984), and Robinson and Schatzberg (1984).

Finally, Penny Baum Moldofsky (1983) provides readers with an excellent summary of schema-schemata when she writes:

Broader than a concept, a schema can be thought of as a framework of abstract knowledge that is both general and reflective of an individual's experiences. Rather than being static entities, schemata change as an individual processes new experience. Indeed, it is assumed that each schema has "slots" which are waiting to be filled as an individual fits new ideas into existing frameworks. (p. 740)

CHAPTER IV

THE PROCESS OF COMPREHENSION

The Influence of Prior Knowledge

One important aspect of a schema-theoretical view of reading is that schemata are reflective of experience; they are made up of a person's prior knowledge of the world. Therefore, in reading, what the reader brings to the text (previously acquired knowledge structures) plays a major role in textual comprehension. Many researchers such as Woodberry (1969), Oatley (1978), and Brown and Steinmann (1978) speak of the actions contributed by these knowledge units. In reading, the hearer or reader uses relevant knowledge to make inferences from the text. It is clear that this relevant knowledge can only be activated because a person does have certain prior experiences - these experiences make up his own mental model of the world. As Woodberry (1969) writes "The Reader's own experience is the key to literature" (p. 1). What the reader strives to do is to make meaningful sense of his experiences, to understand the data collected either from events and passions personal to himself or from the outside world. In order to do this successfully, the reader must bring to bear representations of knowledge:

Where, one asks, do these representations of knowledge come from? The answer is simply that certain

knowledge units have been garnered by an individual as he attempts to make sense of the world. These knowledge units, known as schemata, have been spoken of by many theorists who corroborate the notion that by definition schemata necessarily involve past experiences (e.g., Bartlett, 1932; Applebee, 1977; Goodman, 1984). These writers see that a schema refers to an active organization of past reactions, of past experiences, which must always be supposed to be operating in any well-adapted response. Any particular response is possible only because it is related to other similar responses, organized into regularities or patterns.

Thus we have a schema functioning, on the one hand, as an archive of past experiences and, on the other, as the basis for a set of reasonable expectations about what will happen next. What happens is that determination by schemata is the most fundamental of all the ways in which we can be influenced by reactions and experiences which occurred in the past. As Goodman (1984) assures his reading audience: "Readers must be capable of learning through reading in the sense of assimilating new knowledge to established schemata and also in the sense of accommodating existing schemata to new knowledge" (p. 111). Yet one must know that the ability of a reader to comprehend a given text is very much limited by the conceptual and experiential background of the reader. Depending on the previously acquired knowledge units,

there can, therefore, be very strong limitations on how much new knowledge can be gained from reading a given text.

Other writers support the belief that a reader does not approach a text "empty-handed" (or rather "empty-headed" as the case may be). Instead, they insist that background knowledge units are always employed in comprehension (e.g., Marshall, 1981; Schank, 1982; Tierney and Pearson, 1983; Golden, 1984). Readers know something about the information in a discourse before reading it. They use this knowledge to form expectations about both the discourse content and structure. Consequently, their reading is guided by their expectations. The fluency of their reading depends to a large extent on the way in which they use their background knowledge to guide their reading. As Schank (1982) asserts strongly: "The crucial determinant in what can be read by anyone, child or adult, is the amount of background knowledge they possess to help them determine the meaning of what they are reading" (p. 85).

The key point is that a reader learns words in terms of situations he understands, and in terms of knowledge already acquired. He learns words in terms of a situation and in terms of predictions and expectations he has made about that situation. These situations form the basis of his internal mental definitions for the word he has learned. Through the workings of this operation reading

becomes a recognition process. In order to read we must recognize each word. To recognize each word we must rely on our prior knowledge to help us. Once a reader has seen a word before it becomes easier to recognize it.

It remains clear that one cannot ignore the presence of prior knowledge units acting on a reader's perception in reading comprehension. Certainly the concerned theorists have not forgotten this aspect of comprehension theory. To repeat, they consistently emphasize the influences of past experiences. As Golden (1984) puts it: "For some time the key role of prior knowledge in reading comprehension has been recognized" (p. 578).

Numerous writers such as Wixson (1983), Tierney and Pearson (1983), and Freebody and Anderson (1983) show that reading is a process whereby the reader uses background knowledge together with the author's cues to create meaning. At this point one must emphasize that reading comprehension is not a one-sided process. Both the background knowledge units (schemata) and the cues contained in the text (the content of the text) are of equal importance in processing new information. Comprehension is shown to be a constructive process which involves an interaction between the information suggested by the message and the information provided by the comprehender's existing knowledge. Such an interactive theory of reading assumes that reading involves several levels of analysis. To repeat, these must include such

factors as background knowledge along with the author's cues working to construct meaning.

One can cite numerous other examples of research supporting these contentions. Included among these are the writings of Adams and Collins (1977), Hudson (1982), and Gordon and Braun (1983). These researchers suggest that in recent years there has been an increasing concern with the interaction between the reader and the written page. This interaction is such that the comprehended meaning of a message is fundamentally dependent upon a reader's knowledge of the world and his analysis of content along with the cues contained in the text. Thus readers should interrelate general ideas presented in text and link textual information with prior knowledge. Adams and Collins (1977) summarize:

A fundamental assumption of schema-theoretic approaches to language comprehension is that spoken or written text does not in itself carry meaning. Rather, a text only provides directions for the listener or reader as to how he should retrieve or construct the intended meaning from his own, previously acquired knowledge. (p. 4)

If we accept schemata as knowledge structures which are reflective of experience and necessarily open-ended, making up a person's model, pattern, or scheme of the world, we must then consider how this applies in a reader-response view of literature. It is clear that readers possess previously acquired knowledge units or schemata which aid in the process of comprehending new knowledge. Therefore, if, in fact, a reader brings to bear these

knowledge structures based on prior experiences and information, then recall or memory must certainly be an important part of such a means of processing information or learning. Schank (1982) puts it simply: "We understand everything we hear in terms of what we already know and have stored in our memories" (p. 11).

For many years, various prominent researchers have been concerned with the role of memory or recall in human perception processes (e.g., Bartlett, 1932; Landis, 1982). It seems apparent that a great amount of what goes under the name of perception is really recall. The observer reports what he perceives as he is presented with material. However, he does much more than this: he fills in the gaps of his perception by the aid of what he has experienced before in similar situations or by describing what he deems suitable to such a situation.

It is schema theory which contains the essential accounting of how memory influences perception (Bartlett, 1932). The schemata are constantly developing, affected by every bit of incoming sensational experience of a given kind. The influence of schemata is influence by the past, and remembering obviously involves determination by the past. What is involved is the notion of the recall or memory process as imaginative reconstruction. Bartlett (1932) summarizes as follows:

Remembering is not the re-excitation of innumerable fixed, lifeless and fragmentary traces. It is an imaginative reconstruction, or construction built out of the relation of our

attitude towards a whole active mass of organized past reactions or experiences, and to a little outstanding detail which commonly appears in image or in language form (p. 213).

We see that information is integrated in memory with existing knowledge. Consequently, previously stored information dramatically influences the way new information is understood.

One can report the work of many other writers who agree with these conclusions. Foremost among these are Norman and Rumelhart (1975) who suggest that "When concepts are represented within a person's memory, they must fit within the framework provided by general knowledge of the world. This world knowledge is extensive, encompassing all a person's experiences and all information that he has learned" (p. 6). Further to this, Rumelhart and Norman (1978) explore the question of how memory works within schema theory. They see that memories may be organized within schemata. In any new moment of learning these schemata are activated. It necessarily follows that these schemata are either equal to the situation or inadequate, either partially or wholly. If they are adequate, these writers believe, learning proceeds by accretion to the schemata. If, however, they are inadequate, some minor changes occur in the schemata to suit the new situation. These minor changes are referred to as "tuning". Within this theory it is also conceivable that in some instances the schemata may be

highly inadequate. In this case, there is a restructuring process which is a major modification of the schemata.

Hence, for these writers, "The act of comprehension can be understood as the selection of appropriate configuration of schemata to account for the situation" (p. 43). This selection of appropriate configuration of schemata is seen as a major portion of the processing effort involved in comprehension. Indeed, it is probable that the schema selected will determine the interpretation of the situation. This, of course, is quite a reasonable explanation for why different readers interpret the same material differently - a major concern, if not the basis, of schema theory. To reiterate, Rumelhart and Norman (1978) inform us: "Different schemata will thereby yield different interpretations of the same situation, and different features of a situation will take on more or less importance as a function of that interpretation" (p. 43).

Learning, a very complex activity, is a creative, flexible effort to make meaningful sense of the world. Readers use their prior knowledge in comprehending prose. In actuality, they translate material into their own representations (schemata) of the world. These schemata will be more or less adequate for coping with the task in hand. If inadequate, people will go on modifying their representations and perhaps through this process ultimately improve their performance. Memory is very much

involved in this human performance, and the importance of its role is recognized by many writers (e.g., Oatley, 1978; Graesser and Nakamura, 1982; Scarborough, 1982; Pearson, 1982; Goetz et al., 1983; Surber, 1983). These people hold that one cannot study comprehension without acknowledging that the representation of knowledge in memory is part of the process. This knowledge is organized schematically. It follows that one can possess schemata for all manner of things: the reader must decide what schemata to select in order to comprehend and remember a particular text. The schemata activated focuses attention and aids in processing the appropriate portion of a text. Thus it is clear that recall or memory are important agents in processing a text.

The Link Between Novel Experience and Prior Information

The process of comprehension not only involves the applying of previous knowledge or information units in recognizing old material. Comprehension must also involve learning new information and processing new material. One must also react to the novel. Without new experiences no learning would ever take place, since an individual would stagnate, would never acquire new information or knowledge units. A crossover must somehow be achieved between old information and new material. Readers must form expectations and make predictions about what they are

about to read. Pearson and Tierney (1984) illustrate this quite specifically. They write:

The ability to perceive a text as a fantasy, science fiction, detective story, or comedy, or a character as a hero, villain, foil, scapegoat, or sidekick, activates a whole set of schemata and expectations associated with these prototypes. A reader then attends to the cues that will either verify or refute the prototype, testing out his inferences. (p. 140)

Inferential leaps are an important part of the comprehension process. They are essential in schema selection and instantiation (in deciding who or what in the text fills what slot and in filling slots with default values) (Pearson, Raphael, TePaske, and Hyper, 1981). Various writers place the emphasis on the process of inferencing as being necessary in order to acquire new knowledge (e.g., Adams and Collins, 1977; Flood, 1981; Schank, 1982; Goodman, 1984). These researchers see that an understanding of the interrelationships in a piece of writing typically requires a host of complex inferences. The skilled reader seeks to interpret or impose a structure on the passage as a whole. This involves active processing which does not exist solely within a text, but as a human act of cognition it occurs in the mind of the reader. It is the operation which readers perform while they are reading the text, the conclusions they draw from the material about the things that were not explicitly stated but which nevertheless are valid. As Schank (1982) puts it:

People understand more than they are told, directly. They make inferences and add implicit information to the explicit information they receive. One important source of inferences is the knowledge of standard, everyday situations. People can read more into a story when they have experienced a situation similar to one described in the story. (p. 101)

It is clear that the process of inferencing is an important operation in understanding a piece of writing. Constructing meaning is seen as a hermeneutical experience in which the reader strives for the fit between the whole and the parts and among the parts. To do this a reader fills in gaps or makes both uncued and cued inferences. Essentially, the complete process of comprehending is thus a holistic experience in which meaning is constructed. As Goodman (1984) explains:

In a transactional view both the knower and the known are transformed in the process of knowing. The reader is transformed as new knowledge is assimilated and accommodated. Both the reader's conceptual schemata and values are altered through reading comprehension. Since the published text seems to be a reality that does not change its physical properties as a result of being read, how can it change during reading? The answer is that the reader is constructing a text parallel and closely related to the published text. It becomes a different text for each reader. The reader's text involves inferences, references, and coreferences based on schemata that the reader brings to the text. And it is this reader's text which the reader comprehends and on which any reader's later account of what is read is based. (p. 97)

Goodman (1984) goes on to examine in more detail how inferencing and prediction work in achieving meaning. He concludes that these involve cycles, with each cycle being tentative and partial, melting into the next. It is

inference and prediction which make it possible to leap toward meaning without fully completing the optical, perceptual, and syntactic cycles. However, the reader, once sense is achieved, has the sense of his having seen every graphic feature, identified every pattern and word, and assigned every syntactic pattern.

For Goodman (1984) it is schema theory which explains this phenomenon to a considerable extent. The reader is always moving toward meaning, the goal of comprehending. In doing this he is continuously assigning the highest level and most inclusive schema available. It is the strategies and rules available to the reader which serve as schemata for schema formation. This schema use is always tentative; that is, a schema is assigned and maintained so long as it is useful but quickly modified or abandoned if disconfirmed in the process of its use. All this means that each cycle can only be understood in the context of the holistic process.

A person must acquire new knowledge and make sense of the world, must generate patterns in order to comprehend ideas and achieve meaning. This generating of patterns is a part of the learning process. As Hawkes (1972) puts it "We make the world up in other words, as we go along, and we experience it concretely" (p. 55). This is done through encountering new situations. What happens then is that meaning is never a stable or fixed quality. It is one which words or groups of words acquire in use. We do

bridge the gap between the known and the unknown in comprehending ideas, events, and beliefs. We organize ideas when we acquire new units of knowledge and assimilate them with previously acquired notions.

Reading is a process of discovery -- a creative enterprise. Through this process we organize our experiences into models of the world. This is done through recognizing familiar patterns and generating unfamiliar ones. Much of the current research relates the acquisition of knowledge to a schema-theoretical view of pattern recognition and pattern generation. Hence, we have a powerful relationship between recognizing familiar situations and generating new units of knowledge. One must consider what the researchers say about the interplay between the novel and the unfamiliar (e.g., Thomas, 1969; Mooij, 1976; Rumelhart and Norman, 1978; Tyler, 1978; Iser, 1978; Oatley, 1978; Miller, 1979; Petrie, 1979; Dean, 1983; Wixson, 1983; Moldofsky, 1983).

The research indicates strongly that knowledge acquisition involves both the known and the unknown. In actual fact, attempts to define the unknown must begin with the known. Man strives to understand until the unknown becomes the known; the unfamiliar becomes the familiar; the novel becomes old information. In this way the reader is then able to address newer and fresher material in already known terms. Thereby, clarity is achieved.

The reader must link the novel material with the familiar in the process of assembling meaning; he accommodates new knowledge to old, substitutes new schemata or patterns of knowing for old ones. As Rumelhart and Norman (1978) explain: "We analyze the sensory events of our current experience, match them with some appropriate set of schemata, form a representation for the experience, and tuck the newly created memory structures away in long-term memory" (pp. 44, 45). However, in order to accommodate new units of knowledge, the schemata have to be reshaped in the process of assembling meaning. This does involve not only the recognition of like patterns or appropriate schemata. Rather, Rumelhart and Norman (1978) speak of patterned generation, in which "A new schema can be patterned on an old one, consisting of a copy with modification" (p. 46). Indeed, the more the material presented is further from our familiar world, the more we need new conceptual schemata. In learning, what goes on is the acquisition of schemata which are more powerful, more appropriate.

During the integration of old and new information there is a resulting adjustment in the reader's existing schematic state. This is so, because in order for learning to occur, there must be some modification of the schemata or knowledge base. Again we realize that a schema-theoretical view of knowledge acquisition naturally allows for open-endedness. We cannot just recognize

familiar landmarks, for no new learning would then occur. To repeat, we must constantly add, refine, delete, and modify already existing knowledge structures or schemata.

Moldofsky (1983) says it well when she writes that, schemata are not static entities. Indeed, she states that "Each schema has 'slots' which are waiting to be filled as an individual fits new ideas into existing frameworks" (p. 740). Hence reading can be seen as a process - a building of bridges. This building of bridges links the world of novel experience with that of old information, transfers the knowledge base from the known to the unknown. We must consider further how the process works: how readers use information units - decide which are appropriate schemata in selecting, comprehending, and remembering a particular piece of information.

This brings us to the question of the interpretation process. One can define interpretation, quite simply, as the problem of making meaningful sense of the world. As Bruns (1982) suggests, "The matter may be expressed as follows: The concern here is with what is hidden and with the task of bringing it into the open or into the light. This is the task of interpretation: the so-called hermeneutical task" (p. 112). Seung (1982) speaks further to the notion of interpretation as "The hermeneutic circle of the whole and parts: that is, the whole can be understood only through the understanding of its parts but

the parts can be understood only through the understanding of their world" (p. 48).

Reading is, of course, very much a matter of interpretation. Theorists such as Tyler (1978), and Mitchell (1982) corroborate this notion. They see that reading can be loosely defined as the ability to make sense of printed symbols. A reader uses these symbols to guide the recovery of information from his memory and subsequently uses this information to construct a plausible interpretation of the writer's message. Thus, reading a text is synonymous with interpreting a text, and it follows the same basic principle of interpretation. What is involved is a basic hermeneutical principle whereby understanding a text is a circular process in which we presuppose that the text is a whole composed of a hierarchy of parts or topics. Construing the parts constitutes the whole. This construction of the text is perspectival and open; it has more than one interpretation, and necessarily so.

Consequently, reading a text and interpreting the material read is not a simple task. Rather, it involves very complex processes. Much more than the knowledge of words is required to understand a sentence. There must be general knowledge about the world. To understand a sentence, we appear to combine general knowledge of the world with knowledge of the structure of language and the meaning of the parts of the sentence. Actually, a good

deal of problem-solving behavior is required to determine the exact meaning conveyed by language (Norman and Rumelhart, 1975).

Oatley (1978) speaks of the process of interpretation. He writes:

Perception can be characterized as making meaningful sense of data collected from the outside world. Typically data offered to us in visual and language form are incomplete. The problem is to take these fragmentary ambiguous data and interpret them so that we can understand the world in terms of our relationships with it. The argument developed in this book has been that in order to do this successfully the perceiver must bring to bear representations of knowledge. (p. 229)

These representations of knowledge we recognize as schemata.

Schema theory can suggest answers to the problem of interpretation, whether in reading or in all other cognitive processes. It is in this light that Adams and Collins (1977) see that "Schema theory provides a way of integrating our understanding of text with our understanding of the world in general" (p. 41). These writers elaborate further. They propose:

Reading comprehension depends as much on the reader's previously acquired knowledge as on the information provided by the text. Moreover, comprehension depends on the reader's ability to appropriately interrelate his knowledge and the textual information both within and between levels of analysis. The power of schema-theoretic models of reading lies in their capacity to support those interactions through a single, stratified knowledge structure and a few basic processing mechanisms. (p. 39)

If we accept a schema-theoretical view of comprehension in which we hypothesize new knowledge units and fill in gaps to process new knowledge as well as recognize old material, then we must also consider how the process works.

There would appear to be two separate modes of utilizing schema in comprehending. These are schema identification and schema application, respectively. Graesser and Nakamura (1982) speak of these two differing stages of schema utilization. They see schema identification as "A process of pattern recognition" (p. 62) in which the information accrues in a data-driven fashion. They regard schema application as the part of the process in which "the schema guides processing in a conceptually-driven fashion. During schema application, the schema imposes an interpretation on the input, guides attention, operates inferences and formulates expectations" (p. 62).

The major question of concern here relates to the operation of these processes in reading. Does processing take place in terms of a data-driven or a concept-driven fashion? Do the data form the schemata, or is it that the schema selects the data to be processed?

There is certainly ample evidence to suggest that processing does occur in both these manners. Indeed there seems to be a consensus of opinion among researchers which allows that the process appears to work both ways

simultaneously; that processing is both a data-driven, bottom-up process, and a concept-driven, or top-down method. Thus a reader will use the cues of the text or the data to assimilate information. Likewise, a reader uses his already existing knowledge or schemata framework to aid in processing this knowledge. The important thing to note here is that these processes are not operating independently of each other. Rather, they occur at all levels of analysis at the same time.

Various authors have attempted to clarify the situation (e.g., Norman and Rumelhart, 1975; Bobrow and Collins, 1975; Adams and Collins, 1977; Rumelhart and Norman, 1978; Oatley, 1978; Pylyshyn, 1979; Eöckblad, 1981). Among these, Norman and Rumelhart (1975) outline the following scenario:

If perceptual interpretation is a matter of mapping sensations onto structural schemata, which happens first: interpreting the whole or interpreting the parts? How can someone recognize a face until he has first recognized the eyes, nose, mouth, and ears? Then again, how can someone recognize the eyes, nose, mouth, and ears until he knows that they are part of a face? This is often called the parsing paradox. It concerns the difficulties encountered with either a pure "bottom-up" (part-to-whole) or a pure "top-down" (whole-to-part) strategy in interpretive processing. The solution I propose is that, under most circumstances, the interpretation of parts and whole proceeds simultaneously in both bottom-up and top-down directions. (p. 295)

It appears reasonable to suppose that processing does occur simultaneously in both directions at all levels of analysis. Because the process of reading requires the

integration of all levels of representation of the text, an active reader does more than simply decode the visual information before him, letter by letter, word by word. Instead, information flow goes in both directions. At the same time as the visual and perceptual systems are passing up the results of their analyses to higher-level processes, semantic and syntactic systems are passing their information down to bias the perceptual systems. According to Norman and Rumelhart (1975), the process of textual reading ultimately requires the integration of the bottom-up analysis (working up from the physical features) and the top-down analysis (working down from semantic and syntactic considerations).

The notion that bottom-up and top-down processing occurs at all levels of analysis simultaneously is clearly a viable perspective of comprehension. The system is believed to be driven both by the data and conceptually-guided. Indeed, this is a crucial idea for a schema-theoretic account of reading comprehension. It involves the coordinated activity of schemata at all levels of analyses. Adams and Collins (1977) explain:

As schemata at the lower levels (e.g., visual features) are activated, they are bound to and thus evoke schemata at the next, higher level (e.g., letters); as these schemata are activated, they, in turn, trigger their own superordinate schemata (e.g., words). In this way, through bottom-up processing, the input data are automatically propagated up the hierarchy toward more meaningful or comprehensive levels of representation. At the same time, schemata at higher levels are competing to fill their slots with elements from

the levels beneath through top-down processing. Again, the theory is that, for the skilled reader, both top-down and bottom-up processing are occurring simultaneously and at all levels of analysis as he proceeds through the text. (p. 13)

Basically this is known as the hermeneutical position which allows that as top-down and bottom-up processes operate simultaneously at all different levels of analysis, they work to pull the various fragments of information into a coherent whole. Consequently, it appears that schemata are data-driven in the sense that they respond to the existence of relevant data, but schemata also perform conceptually-driven guidance to the processing by offering internal conceptualizations to add new data, thereby guiding the processing of other schemata. Because each stage of the operation is able to influence the other, there is further evidence that actual perception involves both "bottom-up" and "top-down" synthesis.

The person is steered by the demands of the material, and in turn he forms it according to his own schemes. What happens is that he is active and is approaching the environment on the basis of his own structures, and, at the same time, he is responsive to information coming to him from the environment (Eckblad, 1981). This notion can be compared to the processes of assimilation and accommodation in Piagetian theory. Pilyshyn (1979) follows this line of reasoning when he proposes that

assimilation and accommodation are essential components of processing. He suggests:

Assimilation refers to the process by which the environment is made cognitively accessible by incorporating some of the effects into relatively stable intellectual systems called "schemata". Accommodation, on the other hand, refers to the slower but no less systematic and persistent manner in which the schemata themselves change in response to the demands of the environment. . (p. 421)

Clearly, we can answer in the affirmative to the questions posited earlier. Yes, processing does take place in both a data-driven and a concept-driven fashion. Indeed both these processes operate simultaneously at all levels of analysis. And in fact the data do form the schemata, but the already present schemata in turn select the data to be processed.

At this juncture it may be expedient to examine more closely the operation of interpretation as it involves both bottom-up and top-down processes. Various writers see that a successful reader uses his knowledge carefully; at just the right moment he accesses just the right knowledge structures necessary to interpret the text in a way consistent with his goals (e.g., Pylyshyn, 1979; Mitchell, 1982; Tierney and Pearson, 1983). It is true, then, that the goals set by a reader can determine the knowledge he calls up, and, at the same time, that knowledge, modified in conjunction with the reader's engagement of the text, causes him to alter his goals.

These, of course, are the bottom-up and top-down processes at work in accessing knowledge.

Mitchell (1982) discusses both forms of processing and how they operate in acquiring new knowledge. He writes:

With the first kind of interaction the processing starts with the raw input and passes through increasingly refined analysis until the meaning of the text is eventually determined. This kind of processing is therefore known as data-driven or bottom-up processing. The term "bottom-up" simply refers to the fact that the processing of a stimulus starts at the more peripheral levels and proceeds to "higher" or more sophisticated levels in the system. (pp. 44, 45)

Mitchell (1982) continues on to discuss the second mode of processing. He clarifies in this manner:

The second kind of interaction is produced when decisions made at the higher levels in the processing system are used to guide choices at lower levels. This is referred to as top-down processing. In order to analyse the text in this way the reader has to draw upon his knowledge of the world and his knowledge of the structure of the sentences. For this reason this kind of analysis has also been termed conceptually-driven processing. (p. 106)

There are separate roles played by these differing modes of processing. It seems apparent that bottom-up interactions make a significant contribution to processing during most, perhaps all, of the substages of reading. It has also been suggested that there are top-down influences at most levels of processing including the extraction of visual information from the page, the recognition of words, and the processes that are employed to parse sentences. A number of researchers, which include Adams

and Collins (1977), Rumelhart and Norman (1978), Fisher (1981), and Mitchell (1982) speak to these notions.

These researchers suggest that bottom-up processing occurs when schemata that have been identified suggest other candidate schemata, either at the same level or the next level up. It follows that top-down processing occurs when schemata that have been suggested try to find schemata, either from the same level or the next level down to fill out their descriptions. These are data-driven in the sense that they respond to the existence of relevant data and conceptually-guided in the sense that they use their internal organization of concepts to add new data, to guide the processing of other schemata. In these ways when a schema identifies something, it attempts to integrate the data into its organizational structure and add new information in the form of structured clusters of knowledge that represent objects, events, and actions—namely, schemata. There appear to be at least two types of these schemata: the more abstract level includes the top-level structures such as comparison and story grammar; the more concrete includes schemata for such things as a face, a restaurant, a birthday party, and building a house (Fisher, 1981).

Reading comprehension is explained in a schema-based model as the process of both choosing and verifying conceptual schemata to account for the material to be understood. It is significant that schema-based models of

reading operate on the assumption that all data must be accounted for. We have already agreed that perception involves an interactive combination of top-down and bottom-up processes operating simultaneously. Let us further examine how various researchers explain the accounting for data in terms of these processes (e.g., Bobrow and Norman, 1975; Bobrow and Collins, 1975; Adams and Collins, 1977).

It seems obvious, according to these theorists, that within schema theory, interpretation is guided by the principle that all data must be accounted for. Therefore, every input event must be mapped against some schema, and all aspects of that particular schema must be compatible with this input information. This requirement, therefore, results in the two basic modes of information processing. The first mode, the bottom-up processing, is evoked by the incoming data. The features of the data enter the system through the best-fitting, bottom-level schemata. These schemata converge into higher level schemata, which, in turn, are then activated. In this manner, the information is propagated upwards through the hierarchy, through increasingly comprehensive levels of interpretation. The other mode, top-down processing, operates in the opposite direction. It occurs as the system searches for information to fit into partially satisfied higher order schemata. These are active processing elements which are provoked by way of higher level purposes and expectations.

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Thus a fundamental aspect of the structure of material which is contained within a large, intelligent memory system is that the contexts in which units of this stored information are accessed are critically important in determining how that knowledge is interpreted and used. Within this schema-theoretical view of accessing information "One schema refers to another only through use of a description which is dependent on the context of the original reference" (Bobrow and Collins, 1975, p. 132). It follows that schemata are event driven in the sense that all input data automatically invoke processing. These input events must be accounted for. They generate descriptions which are then fed into a number of potential contexts of interpretation. Some of these may be suggested by these descriptions themselves. The sensory input is consequently fitted into a context, if a quick match is found. This context may be a nonprimitive sensory construct whose description may allow it to be fitted into a higher level context schema. Associated with this schema may be procedural information which indicates an action to be taken if an instance is found. Such action may demand only low-level responses or may request full use of the central processing facilities. As well, other internal events can invoke automatic processing. In this manner one sees that the recognition of a familiar object in unfamiliar surroundings may trigger special responses.

It can be seen that all the input events must be accounted for, but the system also involves conceptual processing, which means that some conceptual schema has to be located for which the data are appropriate. If, in the central analysis of the moment, the data are seen not to be of importance, then almost any schema will do. If, however, the data appear to be important - an importance which is determined by the nature of the schema for which they seem to be relevant - then processing will probably be necessary to elaborate on the manner in which these data are interpreted beyond that provided by the initial schema. This need for further processing (when the data cannot readily be accounted for) probably creates an interruption in the processing cycle. The data will demand sufficient resources from the system to enable them to be processed enough to be understood at whatever level is necessary.

There are really two principles operating (Bobrow and Collins, 1975). There is the principle that all the data must be accounted for, which guides the bottom-up processing. There is also considered to be a single, conscious, high-level mechanism which guides the conceptual processing and takes into consideration the motivation and purposes of the organism.

We should further examine the assumption that in schema-based models of reading there is a single central mechanism guiding the conceptual processing. As Adams and

Collins (1977) suggest, "The notion that the human mind is guided by a central, limited capacity processor is, by now, taken for granted within many psychological theories of information-processing" (p. 9). These theorists explain, further:

Some mechanism which has access to all memory schemata must guide the interpretive process. This is necessary in order to decide when a schema has been adequately filled out for the current purpose, to evaluate the goodness of fit of the data to the schemata, and to detect and appropriately connect metaphorical or analogical references. (p. 10)

This single central mechanism has also been attested to by Bobrow and Collins (1975). They suggest that one important aspect of the organizational structure of processing concerns the interactions of conceptually-driven and data-driven schemata. For these researchers there must exist several overriding considerations, if the system is to have any function at all. There must be some purpose to these activities. There must be some procedure for selecting from among all the different activities taking place at any moment those that are most important for the purposes of the system. Basically, the system must be provided with motivations to provide top-down drives, a capacity to learn, and an ability to be aware of itself - thus the conclusion that there is reason to postulate a single central mechanism having many of the properties which are ascribed to human consciousness.

Bobrow and Collins (1975) describe this central mechanism in more detail. They write:

We believe that all these considerations together require that the system be guided from the top by a single central mechanism, one with awareness of its own processes and of the information sent to it by lower order schemata. We believe this central conscious mechanism controls the process that schedules resources, initiates actions by making decisions among the alternatives presented to it, and selects which conceptualizations to pursue and which to reject. (p. 147)

We have already demonstrated that processing is an interactive combination of top-down and bottom-up processing operating simultaneously. There are, however, limitations to this processing. One must examine both data-limited and resource-limited restrictions on processing. Adams and Collins (1977) speak of these notions. They see that the data that are needed to fill out the schemata become available through bottom-up processing: top-down processing facilitates the assimilation of the data, if they are anticipated or are consistent with the reader's conceptual set. It is bottom-up processing which insures that the reader will be sensitive to information that is novel or that does not fit his on-going hypotheses about the content of the text. The top-down processes help him to resolve the ambiguities or to select between alternative possible interpretations of the incoming data. Because of these interactions between top-down and bottom-up processing, the flow of

information through the system is considerably constrained. As these researchers put it:

Taking this notion back to the schema-theoretic model, we see that there are two basic ways in which the processing capabilities of the system may be limited. First, there may be some difficulty in mapping input data to the memory structure with the result that their normally automatic, bottom-up propagation through the system is data-limited. Second, the various simultaneous demands for active control may exceed the system's capacity to cope; in this case, the system is resource-limited and the execution of some of the ongoing activities will be compromised. Both kinds of limitations are relevant to the reading process. (pp. 10, 11)

Finally, it is clear that human information processing is very complex. Bobrow and Collins (1975) sum up our notions of automatic and conscious processing operating simultaneously. They write:

Conscious processes are invoked whenever underlying schemata provide information for evaluation, whenever new processes must be invoked or old ones terminated, or whenever the output of one schema must be communicated to others not immediately invoked. Any time that there is a mismatch between data and process or expectations and occurrences, conscious processes are brought in. The automatic, active schemata of memory and perception provide a bottom-up data-driven set of parallel, sub-conscious processes. Conscious processes are guided by high level hypotheses and plans. Thus consciousness drives the processing system from the top-down, in a slow, serial fashion. Both the automatic and the conscious processes must go on together; each requires the other. (p. 148)

CHAPTER V
FROM THEORY TO TEACHING LITERATURE

Implications for the Teaching of Literature

If a schema-theoretical view of reading is a viable approach to understanding reading comprehension - and the research certainly suggests that this is so - then as teachers we must be concerned with the implications of such a process-oriented approach to the reading and interpretation of literature. The question of vital importance to us concerns how we might modify the English curriculum to accommodate these ideas.

Perhaps the first step towards a composing model of reading is becoming aware of its existence. As teachers we need to know that such research is available and that it can indeed be verified. It is clear that quite often we teach as if we were literary critics who expect our students to be literary critics. No longer is such a narrow approach to reader response justified or even acceptable. Iser (1978) speaks of the literary critic who tries to explain the meaning he has discovered. Using this approach, literary criticism proceeds to reduce texts to a referential meaning. This is in spite of the fact that such methodology has already been persistently questioned, and was put to question as early as the end of the last century. As Iser (1978) writes, "The traditional expository style of interpretation has clearly had its

day" (p. 10). This writer posits that it is in the reader that the text comes to life. Therefore it is the process of reading that needs to be investigated. It is when the text is experienced that it begins to unfold its potential. There is no right interpretation, and therefore it is fatal to try to impose any single, sole meaning on the reader.

Granted that this may be a newer, somewhat mystifying approach to interpreting literature; hence, many teachers may fear such an open-ended approach in which they can no longer delineate a "right answer". It would appear to make life easier (for the teacher) if one requires students to elicit an already assigned meaning. This, however, does not justify the continuance of methodology already shown to be unacceptable. The teacher must make allowance for the personal subjective experience of the responder while still maintaining the commonality of knowledge grounded in and structured by the text.

It would appear that one major problem people have with accepting the notions of schema theory as a means of comprehension or information processing is the subjective nature of the approach. Although the very definition of reading as an interactive process between text and reader removes the possibility of a purely solipsistic interpretation simply because of the constraints provided by the text, for many this realization is not self-evident.

As human beings we do live in a subjectively constituted world. Poole (1972) verifies this when he speaks of solipsism as being "An incurable state into which we are born" (p. 131). Wellek and Warren (1977) also speak of this subjective experiencing. They see that every individual piece of reading contains something idiosyncratic and purely individual, something which is coloured by our moods and our perceptions, and ultimately by our backgrounds. Therefore, even two readings at different times by the same person may vary considerably.

It is the meaning of our experiences which constitutes reality. We believe that we experience things as they are so long as we have no good reason to believe otherwise. Hence the world inside our heads proceeds from our experience of the world; we make sense of the world around us and as agents we act in the light of the sense we make (Hudson, 1975). The notion of what is there is basically what we construct. This, however, is not a fixed entity. We hypothesize patterns and account for things, but these models are constantly being reevaluated and revised so that our constructed models of the world can relate to new knowledge and experiences. Thus we proceed from prior experience but also react to new data; in this case the new data specifically involves new texts. As readers we may interpret variously, yet it must be remembered that any interpretation is not completely

subjective to the point of becoming unreasonable or bizarre.

First of all, our world is never wholly private, for each of us is born into a historically given world that is simultaneously both natural and socio-cultural. Various researchers such as Woodberry (1969), Seung (1982), Goodman (1984), and Harste, and Mikulecky (1984) attest to this notion. They speak of the idea of cultural sharing in which readers in a given culture, interpretive community, or classroom share a certain meaning from reading a piece of material. Readers share a human nature which is common to the race besides special traits of their particular ages and countries. Language is a part of this complex human culture and this necessarily includes written language. As readers experience this written language their interpretation is culture-bound because of the shared cultural context.

The world is an intersubjective one; each of us is an element in the life situation of others just as they are in ours. Therefore, for the most part, we do share a commonality of experience which also serves as a constraint upon our perceptions. As Peacock (1972) suggests, "Subjectivity is not equivalent to the eccentric, the absolute private, which is mental isolation or breakdown. The subjective is the inter-subjective; it is something that can be understood by, and shared with others, though not necessarily all others" (p. 37).

The idea that experience can be shared is not a recent notion. Kelly (1955) spoke quite clearly of how each of us can construe events in the world of others through the sharing of common ground or cultural identifications. He saw that it is true that no two people can play precisely the same role in the same event, even though they may be very closely associated. But this does not mean that there can be no sharing of experience. Rather, he explains:

Each may construe the likenesses and differences between the events in which he himself is involved, together with those in which he sees that the other person is involved. Thus while there are individual differences in the construction of events, persons can find common ground through construing the experiences of their neighbors along with their own. (pp. 55, 56)

When we read a text we are put into touch with some other person's accounting of the world. In essence, we are allowed to transcend another's world. To this we react in terms of our own personalized schema bounded by the constraints structured in the text itself.

The notion that the text itself provides constraints for the reader is a necessary and integral aspect of schema theory research. Holland (1975) speaks of this when he says that each reader is free to react in as extreme a manner as possible. However, he believes that most reading is not solipsistic. He states: "Every reader has available to him what the writer created - the words on the page, that is, the promptuary (a store of

structured language) from which he can build an experience" (p. 286). McFadden (1978) agrees with Hollard when he suggests: "By nature of its strata of sounds and meanings, the work is intersubjectively accessible, and can also be reproduced" (p. 49).

Other researchers who support these notions include Iser (1978), Tyler (1978), Culler (1981), and Wellek (1982). Each of these writers has something precise and definitive to say about interpretation being constrained by the text itself. They clearly refute the stand that literary interpretation is a purely subjective, solipsistic act. The reader's reaction is not arbitrary but instead is prestructured or guided by the language of the text itself. In this way, each text builds an immanent structure for its own interpretation and that interpretation must be constrained by the limits of the text itself. Consequently there is no complete liberty of interpretation. A reader does not forfeit all claims to objectivity. As Wellek (1982) writes:

Ideally interpretations can be correct. If all interpretations or readings were equal we could not differentiate among them. But it is surely the experience of every teacher that he can and must reject wrong interpretations and that he even can, in concrete cases, refute a wrong interpretation by an appeal to the text or an appeal to the totality of a work while the perverse interpreter may have fastened on some detail or distorted the meaning of a phrase. The concept of adequacy of interpretation leads clearly to the concept of correctness of judgment. Evaluation grows out of understanding; correct evaluation out of correct understanding. (p. 52)

Accepting the notion that reading is a personal subjective experiencing, perhaps the single most important directive that we, as teachers, can take from this reader-response view of reading comprehension is the cue to somehow structure the experience for the reader - we must personalize the experience. Therefore the teacher has to set up the reading situation so that the student is allowed to react on his own level with the material. As Holland (1975) sees it, "Readers read differently because of their different personalities" (p. 203). Their reading results in a personal pattern in which insight and self-knowledge are the ultimate life goals in interpreting literature (Peacock, 1972; Altken, 1976). Therefore the student must be allowed the freedom to read variously, and in his reading he should learn something of himself and his world.

In view of this, the teacher has a responsibility to consider the individual student. This is confirmed by various researchers who see that literature is an exploration of a vast range of individual perceptions and attitudes (e.g., Morgan, 1977; McMaster, 1977; Martin, 1981). Teachers of literature must allow for the individual in a centered, personalizing world, must remember that the study of literature can expand unique and personal lives. By enabling the student to experience the great variety of human responses available through

literature, the teacher encourages him to extend his own personal world.

Overall, a schema-theoretical view of the composing process requires us to modify many of our traditional views of reading comprehension. As language (literature) teachers, the implications of such modifications are important notions for us to consider. We need to pay more attention to how human beings construct their personal worlds - namely, how each of us constructs meaning. We need to concern ourselves more fully with the viability of readers as agents who construct interpretations.

Man is a creative force in his own world. As Kelly (1955) suggested, "Each man contemplates in his own personal way the stream of events upon which he finds himself so swiftly borne" (p. 3). For students, reading is a necessary part of these streams of events. The teacher must proceed with this notion clearly in place. As Holland (1975) posits, "Each act of reading is constructive. It makes something new, something human, something personal - or else no real act of reading takes place" (p. 122). Following hard upon this, Holland has some advice for the teacher. He shows the ideal to be that "Together, teacher and students create a space that contains the literary work and into which some individuals project their own statements about the work and from which all draw resources to synthesize their own experience of it" (p. 216)..

This personal experiencing of events (in this case, events in literature) is, of course, rooted in "belief". Brown (1977) warns us: "One conclusion to be drawn from this is that any inquiry - whether scientific or religious or artistic - must be based in part on a personal and, in a sense, nonrational belief" (p. 46). We do apparently proceed from belief, and as teachers we must be aware of this aspect of knowing.

We think of Gerald Bruns' (1982) definition of invention as "The act of finding things to say, and saying them for whatever purpose" (p. 1). Our purpose, in this case, is to interpret. In reading and interpreting we invent meaning which is not fixed; rather we see it as constantly needing to be replenished. Interpretation is, therefore, a constructive act, an activity of self-correction and progressively emended readings. In light of this, interpretation can never be unilateral; it must need be grounded in the personal; for understanding a representation will always involve us in self-understanding.

Brown and Lyman (1978) inform us that we all create worlds. They regard interpretation as a rigorous way of knowing and believing: through interpretation we come to understand our activities and ourselves. By supporting and fostering a personalized view of interpretation in our students, we encourage moral participants in a community - the community of language. It is this notion of allowing

students to become agents in the constructing of meaning that has to be our goal as teachers of literature.

In conclusion, we recall the words of Goodman (1984), who writes:

Since comprehension results from reader-text transactions, what the reader knows, who the reader is, what values guide the reader, what purposes or interests the reader has will play vital roles in the reading process. It follows then that what any reader comprehends from a given text will vary from what other readers comprehend. Meaning is ultimately created by the reader. (p. 111)

Suggestions for Improving the Teaching of Literature

From these various research efforts based on a schema-theoretical approach to reader response have come certain specific suggestions for improving the teaching of literature. After all, for high school English teachers, the central concern always should be to facilitate the process of reading and thus simultaneously engender literary interpretation.

It is true that there are many practical strategies available for implementation in the classroom. Actually, such techniques have been discussed in the literature for quite a few years, yet there obviously remains a major gap between the nature of schema theory and the converting of these notions into realistic practice in the classroom situation. Moldofsky (1983) addresses this issue when she allows that "The abundant research on schema theory has

not helped teachers bridge the gap between schema theory and teaching strategies" (p. 740). Consequently there is a strong need to present these suggestions in as direct a manner as possible. In light of this need the remainder of this work will focus on providing some basis for the discussion of practical teaching strategies which could be developed in response to schema theory.

The teaching of reading comprehension is vital to the process of interpreting literature. By reading comprehension we do not mean merely the ability to decode words but the ability to extract the meaning from the written page. This depends on the intricate coordination of visual, linguistic, and conceptual information-processing systems (Adams and Collins, 1977). The notions of schema theory can provide a means of directing this process of reading; these notions call attention to the process itself which is the main focus of concern in reader-response theory. Essentially, the instructor must try to teach a schema that provides learners with a process for interpreting stories (Moldofsky, 1983).

All of the research cited in the previous chapters has consistently reinforced the principle that the interactive workings of both previous background knowledge and new knowledge units are of prime importance in a schema-theoretical view of reading. Thus any suggestions for improving students' knowledge are of paramount significance to teachers of reading. In fact this

importance cannot be underestimated. The teacher of reading would do well to consider these ideas for teaching reading comprehension and literary interpretation.

To begin, it has already been clearly established that using background knowledge is an important part of the reading process. Actually it seems apparent that if a reader is not actively using background knowledge then a significant part of the reading process isn't taking place (Carrell, 1983). The teacher must recognize that herein meaning comprehension suffers and therefore must try to personalize the experience for the reader so that background knowledge is activated.

Perhaps the first step for the reading instructor is that of assessment. If activating background knowledge units is of such importance, then the teacher must find out what a child currently knows so that he can build upon these knowledge units. Once the teacher is aware of how much the reader already knows about the situation he can then proceed to teach the reader to rely upon this world knowledge. The reader can learn to apply the appropriate knowledge to help fill in the details behind that situation. Therefore what needs to be taught to facilitate comprehension is world knowledge and the processes that utilize that knowledge (Schank, 1982).

We have already seen that this background knowledge is organized into units known as schemata. It is the teacher's job not only to ensure that a child possesses

the necessary relevant knowledge units but also to see that the child knows how to use these schemata to aid in processing reading. Problems in reading comprehension may be traceable to deficits in knowledge. In other words, poor readers may not possess the schemata needed to comprehend passages of a text. It is also true that in some cases these readers may possess the relevant schemata but not know how to activate them in bringing meaning to bear. Or, indeed, such readers may not be able to change schemata when the first one tried proves inadequate.

In all of these cases it is clear that poor readers either lack the background knowledge required to comprehend stories or lack the ability to utilize this knowledge properly. Since good readers already seem to possess the necessary strategies for using their world knowledge to understand the situation at hand - namely, the material to be read, the teacher must ensure that poorer readers engage in background building. Because the teacher understands the structure of knowledge in his area these needed pieces of background information can be filled in through using strategies such as class discussion, in which the interaction with the group will develop and refine the schemata necessary for comprehension (Robinson and Schatzberg, 1984).

At this point we should reiterate that the notions of schema theory not only involve utilizing background schemata but also concern the acquisition of new knowledge

units. Together, these interact to form a reader's knowledge bank and to direct the process of comprehension. Therefore, in order to learn, the reader must acquire new knowledge units which interact with previously acquired schemata to facilitate comprehension. It follows that once the teacher has ensured that the readers are activating prior knowledge, there may be a gap between what they already know and what they need to know in order to comprehend the text.

The reading instructor can, at this point, take a cue from Schank (1982) who believes that the context method is how reading must be taught. Within this method the acquisition of new knowledge is emphasized first. This new knowledge brings with it a new vocabulary which is added to the reader's sight-recognition vocabulary. Knowledge of the whole situation is what enables the reader to make the necessary connections in the text, so that he can gain new knowledge.

One of the main points that emerges from this approach to reader-response theory is the notion that the reader must access the necessary new vocabulary to allow for the acquisition of new knowledge. Is this not why the reading instructor tries to make sure that the vocabulary encountered is recognizable to the student? We must not only set up the experience for the student; we must also ensure that such a notion is attended to. This is of prime concern as a main step in facilitating reading

comprehension. Therefore an important directive for the teacher is that he must in some way ensure that the reader learns new words. This is the first step towards meaning.

The reading instructor can come back to the context method of reading which emphasizes the acquisition of vocabulary. It follows that the instructor must present words in terms of situations which allow the student to interrelate old knowledge units with the new knowledge to form new schemata which in turn access the material being read. In this way literary interpretation should proceed on cue. Schank (1982) verifies this. He writes:

Since the meanings of words are very complex, and usually situationally-based, there really cannot be any other way for a child to learn new vocabulary. He does not learn one word in terms of another. He learns words in terms of a situation and in terms of predictions and expectations that he has already made about that situation. Such situations form the basis of his internal mental definitions for the word he has learned.

The key point then is this. A child learns words in terms of situations that he already understands, and in terms of knowledge that he has already acquired. At any point, a child has more knowledge than he has vocabulary available to express that knowledge. Give him vocabulary at the right level and he will learn very quickly. The key to teaching vocabulary is the assessment of the child's knowledge. (p. 14)

A major point to be recognized here is that the assessment of the child's knowledge must necessarily involve recognizing the position of the reader in terms of the situation at hand. Indeed it is essential that the reading instructor present words in terms of the situation and the predictions and expectations that the child has

already made. In view of this, the teacher has first to recognize that the reader does possess an ability to meet a situation by forming expectations and making predictions to cope with the current material. Indeed, being able to predict is of prime importance in understanding, because we predict nearly everything that is a part of the comprehension process. To a considerable extent it is prediction which forms the basis of our ability to read (Schank, 1982).

The teacher must understand what is meant when he is directed to make use of a reader's predictive knowledge to help the process of understanding. What is this predictive ability? Schank (1982)* provides some clarification. He writes:

What does it mean when we say that we rely upon our ability to predict during the process of understanding? By that, I do not mean that we "know" with great certainty what will come next. Nevertheless, we do have an "idea" about it, and this idea is used by our comprehension processes in selecting alternatives. Thus our predictive abilities make out processing easier by narrowing the number of possible false paths we might choose in ambiguous circumstances. This predictive ability is useful in every single part of the comprehension process. (p. 25)

The instructor not only must recognize that readers do possess this predictive ability but also must see to it that they make use of it. The teacher can capitalize on a reader's predictive ability in order to facilitate reading comprehension. He must see to it that the reader is able to make a wide range of predictions and indeed he must stress the need to predict. As the reader improves in

understanding, his predictive sense can be directly honed. This, actually, forms a large part of what must be taught in the teaching of reading prowess. The teacher must help readers to organize their knowledge, then to use this knowledge to create expectations before and during reading (Marshall, 1981; Schank, 1982).

These notions are directly linked to a reader-response view of teaching literature. Readers do normally possess schemata which allow them to formulate predictions and expectations, a process by which they may account for incoming data. In fact, a schema allows reasonable predictions to be made about any situation to be encountered.

It is true, however, that a reader does not always possess the schemata necessary to guide reading. Then too, the reader may possess the knowledge units but not activate these schemata in his reading of literature. Therefore it is the teacher's responsibility to guide the reader in developing and using the appropriate, most relevant schema available to aid in word processing. The teacher must help the reader to organize information.

But what happens when established knowledge structures are not adequate? It is then that readers may require transitional information to narrow the gap between the novel material and appropriate cognitive structures. The reading instructor must provide this transitional information for the student. Consequently, one of the

very important directives for the teacher is that he ensure that students are familiar with the conventions of reading. Knowledge of these conventions helps guide a reader's perceptions and expectations; in fact, this knowledge helps in the transition between novel material and established schemata.

Through the experience of reading and hearing many stories, students acquire a set of expectations which serve as a guide as they organize story information. These are somewhat like slots that they fill as they listen or read. These expectations are sometimes called a "story schema". A "story grammar" attempts to describe this story schema (Sadow, 1982).

Such a story schema or internal cognitive structure is used for information processing. McConaughy (1982) suggests that a story schema describes an internal organization which readers and listeners bring to a story text. These readers seem to have an idea of what a story is and what types of information should be included before they are presented with a specific selection. A cognitive schema sets up expectations for what is coming next and operates in the reconstructing of story information during recall. Significantly, the story schema also determines which information is considered most important by the reader or listener.

Readers need to look for structure in a text. They need to incorporate these information units into their own

story schema. The instructor must fill in the gaps in the reader's knowledge and ensure that students integrate the text into their own schema, using structures in the text to help organize information. Therefore readers must have an ability to perceive this structure in the text which in turn depends both on their familiarity with the ideas in the text and how the present structure serves to highlight these ideas (Beach and Appleman, 1984).

Knowledge of literary genre conventions and text structure do influence how readers understand and remember narratives. Consequently there is a responsibility to provide students with this organizational information or schema to enable them to process stories and achieve a high level of the understanding of narrative. As Rand (1984) says:

The schema helps the reader attend to certain aspects of the incoming material while keeping track of what has gone on before. The schema lets the reader know when a part of the story is complete and can be stored in memory, or whether the information should be held until more is added. (p. 377)

To put it simply, the reading instructor must see to it that the reader acquires particular genre competencies. As students acquire knowledge of these literary conventions from their reading and sensing experiences, they improve in their ability to structure narratives about a central goal, intention, or problem (Beach and Appleman, 1984).

This process of determining the central story problem is most significant to a schema-theoretical view of

literature. When the instructor models the process of determining the central story problem, he shows students how to employ a strategy that fits countless stories. He also demonstrates a model of reading based on verifying or modifying a hypothesis. Thus students see that there may be other possibilities, but these alternative ideas can be used only if they fit the printed message in some reasonable way. In essence this is modeling an interactive view of reading (Moldofsky, 1983).

To continue, we come back to the role of the reader's knowledge base operating in reading comprehension. As Schank (1982) sees it: "One of the very important tasks of the reading instructor is to assess what a child currently knows so that he can build upon it" (p. 12). This writer suggests that the key issue in comprehension is the application of appropriate knowledge to a situation. Such knowledge is used to help fill in the details behind that situation. It is true, however, that readers cannot be expected to understand stories if they lack the needed background knowledge. It is also true that readers can be taught to expand their background knowledge and thus extend what they can read.

One of the considerations that emerges from this research is that good readers probably utilize background knowledge differently from poor readers. Teachers must be aware of this difference and ultimately strive to ensure that the poorer reader utilizes background knowledge

properly. In this way even the poorer reader need not be satisfied with a piecemeal experience but will strive for that fit between the whole and the parts which is the ultimate goal of reading.

There are ways for the teacher to ensure that the poorer reader begins to utilize background knowledge properly. To do this the instructor must capitalize on the use of various pre-reading activities. Some of these have already been considered. There are many others whose importance is not negligible by any means. As Robinson and Schatzberg (1984) propose:

Prereading activities are instrumental in developing readiness for comprehension. Recent theoretical developments and research in schema theory and linguistics indicate that teachers should help students discover and organize concepts that will bring them closer to the concepts and linguistic style of the author. In other words, the teacher should try to help bridge the distance between the schemata of the student and the schemata of the writer. (pp. 234, 235)

The teacher needs to provide these organizers for the student. But the teacher must also see to it that these are attended to, for the process of organizing is very important in developing readiness to read. Actually, people seem naturally to impose various types of organization on incoming information. If teachers assist this ability to organize by helping students form categories prior to reading, their students will benefit greatly. They will be better prepared for a particular piece of reading and will also learn cognitive strategies

that they can apply to other reading. There are several instructional tools which have been suggested to help students develop the organizational schemata for the information to be learned. These include advance organizers, brainstorming, and structured overviews (Robinson and Schatzberg, 1984).

Such techniques can be valuable classroom activities that result in students becoming aware of information they already possess and gaining information that others possess. The creative and unobtrusive teacher can make great use of these instructional tools to help activate and develop the organizational schemata needed to aid in comprehension. Through their use he can bridge the gap between what students know and what they need to know to process a text. Certainly, the variety of ways in which these tools are used need be limited only by the creativity and flexibility of the individual teacher.

As well as these organizing techniques, the reading instructor can make use of other directive techniques and strategies in facilitating word processing. As Robinson and Schatzberg (1984) see it: "Helping students develop strategies for interacting with authors of texts and other materials available within and outside the school is the responsibility of every teacher" (p. 233). These directive techniques can work. They can be thought of as instructions to the reader to use part of one's knowledge about the world and knowledge about the text itself to

make sense out of the text and integrate it into a meaningful message. In this way comprehension recognition and recall can be improved (Nix, 1981).

When one considers directive techniques one must necessarily account for the role of perspective in the comprehension process. Perspective does play an important role. This has been verified in the literature. Consequently, teachers must remember that students do approach reading (indeed, all activities) from different perspectives. As Charon (1979) writes:

We might see things differently if we imagine that each one of the individuals (including the interviewer) comes to the situation with a different perspective, and therefore sees a different reality, and although some of these perspectives may be closer to "physical reality" than others, all of them probably capture at least one part of that reality, and none of them is able to capture the whole of it. (pp. 2, 3)

Although it is true that perspectives are what enable a student to make sense of his world, they, in turn, can limit the understanding of the student. Thus the instructor should realize that perspectives must be judged by individuals as relatively helpful or useless in interpreting situations that arise (Charon, 1979).

Another point worthy of note is that perspectives are not set for life. The instructor can influence these guides to perception. As Charon (1979) says:

Any one individual is made up of several of these kinds of perspectives and may enter any one of them in a situation. Indeed, once in the situation, the individual can change perspectives or even find the initial

perspective being transformed as he or she interacts with others. (p. 9)

In actuality, this notion fits in so well with the ideas of schema theory that we can equate a perspective with a schema and the teacher's attempt to guide perspective as activating schemata to cope with situations to be encountered.

As well as the ones already explored there are other strategies that teachers can use to guide students in adequately interpreting the material they read. One of these instructional tools involves the writing experience. Writing can be used for assessment purposes, but writing can also be used to enrich content area reading. Teachers should consider using writing tasks to help students perceive the structure of texts (Sanacore, 1983).

A note of caution is in order here. This must be a process oriented approach to writing in which synthesis is the main objective. Students will not benefit from fragmented writing. Rather, the teacher would be well advised to use strategies which develop writing skills and increase students' potential for understanding their own and other people's writing.

Most teachers are aware of strategies available to direct the writing experiences of students. These include using story structure instruction which involves a writing component for the purposes of enriching reading.

It is clear that there is a need for a writing component in the reader-response view of literature.

Again, teachers would do well to remember that the methods used can foster students' reading through a variety of ways. Such methods will differ with the individual instructor. The most important cue here is that these experiences not be piecemeal. They must work well with the notions of a schema-theoretical approach to reading in which there is a strong connection between both reading and writing.

Another very important instructional tool available to the reading instructor is the use of questioning strategies to enhance reading. We, as educators, must recognize the powerful influence of questioning; we can no longer consider our questions in isolation from the reader and the text. As Hunkins (1976) writes:

The question is an integral, if not the integral, component in processing information. Regardless of whether a teacher is functioning inductively or deductively with data, he or she needs to generate questions. And the questions that are created and the manner in which they are phrased and sequenced influences the quality, the significance, and the accuracy of the learner's conclusions and what is done with those conclusions. (p. xx)

The importance of the question cannot be denied. Indeed it is vital to all process models, since without the question there is no processing of information. It is the question that centers the person's attention upon some topic; it is the question that enables data processing; it is the question that determines whether a conclusion is justified or not. To put it simply, in the absence of the question there is an absence of learning (Hunkins, 1976).

The instructor can use the question to assist students in processing information. Through its use he can focus student functioning and provide a means for distinguishing relevant from irrelevant information. As well, the question can point up major relationships among information bits, create new insights, and serve to assess the results of inquiry. Meaningful questions and questioning which is couched in student activities will enable students to gain understanding of their affective reactions to learning (Hunkins, 1976).

It is important that questions not be isolated from the experience of the students. In a schema-theoretical approach to reader response the experiencing by the student is all-important. Therefore questions should occur within a schema which allows for the knowledge of the reader. Those questions commonly associated with classroom reading assignments do more than provide focus. They promote different interactions between the information suggested by the text and the reader's existing knowledge. In turn, this can result in differences in the nature of students' learning (Wixson, 1983).

Consequently, instead of basing questions so as to elicit the "right meaning", teachers must structure them to fit the experience for the reader - indeed, for each individual reader. What is involved here is the notion of the schema-based question in which the question is

derivable from the text. However, the anticipated answer is neither implied nor explicitly represented by the text. Rather, the reader provides a response that emanates from the relevant schemata activated by the reader-text integration. In this way a reader's knowledge base is affected by the questioning process as he is provided with an additional opportunity to interact with the textual information. The integration of old and new information occurring during this interaction may well result in an adjustment in the reader's existing schematic state. The exact nature of this modification of the reader's existing knowledge is determined by the manner in which he processes the textual information while answering the question. In this way learning can take place (Wixson, 1983).

The question can be used as an organizer, a device to help students organize their thinking to achieve their objectives. As students ask questions while dealing with various learning situations they provide themselves with data or an awareness of deficits in data. This type of knowledge is essential if students are to assume major roles in their learning (Hunkins, 1972). We note here that questions generated by both teachers and students are of concern to us. Both types of questioning strategies will greatly enhance the comprehension of material to be read and will definitely stimulate cognitive growth.

There is a clear need to ask questions prior to reading in order both to organize information and to set up expectations about the material to be read. Yet the asking of questions beforehand does not eliminate the need for posing questions subsequent to reading the text. Indeed, such questions can induce readers to process information much more thoroughly. The key point is that both of these questioning strategies can be valuable learning tools in the processing of text.

It remains that the reading instructor needs to be aware of questioning strategies which involve students in learning. This theoretical knowledge can be applied to reading strategies in practical ways including kinds and numbers of questions to be utilized, yet awareness of the need is the first step. As Hunkins (1976) writes:

Student involvement is crucial, and the asking of questions is central to this involvement, not just when something is not clear, but in actual dealing with information. The processing of information has a planning stage, a doing stage, and an evaluative or feedback stage. Learners must participate in all of these stages, and, their engagement requires asking questions. (p. 4)

Assessment and evaluation are other important areas of teaching reading comprehension which deserve to be investigated. In practice, these seem to present the most problems for the teacher of reading. Exactly how does one go about evaluating students if there are no "right answers"? This is a lament heard quite often. As well, other questions spring to mind. For example, what does this theory do to the notion of using standardized reading

tests to measure comprehension? And how does the instructor reconcile the belief that the guidebook answer provided is not necessarily the correct answer, indeed not necessarily the only acceptable answer?

The replies to these questions in terms of reader response theory are often received with doubt and uncertainty because of already accepted methodology which does not fully support these notions. Yet it is true that the student must be assessed in some manner. It is also true that schema theory is not incompatible with this need. Actually it does provide direction and guidance for the teacher of reading who also must assess and evaluate.

Perhaps the teacher should first of all recognize that assessment must be carefully planned to coincide with the theoretical framework provided. What is the benefit to the student of literature if the instructor approaches his subject from these theoretical concepts and then in the end assesses the reader using methods which are no longer acceptable? Assessment must be compatible with the process utilized. As Robinson and Schatzberg (1984) demonstrate, "Methods and purpose in assessment must be closely aligned; that is, the method of measuring comprehension should be carefully planned in relation to the original purposes set for reading" (p. 248). This need for planning so that there is an alignment with original purpose has important ramifications for the type of assessment methodology utilized. For example, this

suggests that students should not be asked to answer questions that they could not have predicted in the original plan for reading.

Essentially, all this means is that evaluation should be comprehensive. As Farr and Wolf (1984) point out:

Oftentimes evaluation concerns itself with only one aspect of a reading program, usually the aspect that lends itself most readily to some available assessment strategy, or existing measurement device. The process has a context-stripping effect, that is, studying something in isolation from the context in which it exists. We maintain there is no meaning other than meaning in context, and therefore it is essential that an evaluation effort be a broad and comprehensive one (p. 275).

All too often, evaluation is not comprehensive. Many times it is limited to one type of assessment which does not elicit an awareness of the overall picture. For example, instructors often use tests as the only means of evaluating. Certainly tests are useful, but they are only one means of gathering information about the multiple aspects of reading. It is clear that in light of schema theory findings, instructors need to be wary of using any one test as the sole instrument of evaluation.

This applies as well to the use of standardized reading tests to assess comprehension. Cullinan and Harwood (1983) speak firmly against such usage. From their findings, based on the premise that reading is not a search for one right meaning, they conclude:

Comprehension tests that assume one right answer give an inadequate picture of a reader's comprehension. Furthermore, comprehension needs to be looked at as a process rather than a

product. Since comprehension is a complex phenomenon, it must be studied in a way appropriate to the phenomenon. We can no longer study just the reader or the text. We must examine the interaction between the two. (p. 37)

This, of course, is research which disallows any complete trust in the efficacy of standardized reading tests as the only means which can be used for assessing students' reading.

The overall purpose of assessment should be to facilitate reading comprehension. To do this there are a variety of techniques available to the reading instructor. However, in order for them to be successful they must be incorporated into the notions of the theoretical framework of schema theory. In this area, as in all other areas of reading, the enterprising teacher can and will meet the challenges of reader response theory. To conclude, the key point to remember always is that the notions of schema theory do provide a viable alternative in the teaching of reading comprehension. When we, as teachers, can accept these ideas and utilize them in our classrooms then reading comprehension can only be facilitated. Who knows? In the end, the teacher might make a difference.

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