LANGUAGE AND LITERACY: THE SELECTED WRITINGS OF KENNETH S. GOODMAN

Volume I
Process, Theory, Research

Edited and introduced by
Frederick V. Gollasch

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FOREWORD

In the early 1960s, as a doctoral student at UCLA, I became
interested in looking at reading. My interest grew from two
sources. One was my concern as a graduate student to familiar-
ize myself as fully as possible with research and theory relating
to reading. The other was my curiosity about the implications
for education of the explosion of activity in the field of lin-
guistics.

The more I read the more convinced I became that linguistics
had to have the key to some of the unanswered questions in
reading. As I pushed that idea I also realized that there were
many significant questions linguistics generates about reading
that had not even been asked before.

But an extensive survey of the literature in reading and
linguistics showed only a handful of writings in this field. That
left me with a dilemma. Either I was moving down a blind alley
others had already abandoned or I was out at the frontier of
the field. Events of the next few years made clear that the
latter was the case. One can not now pick up a text or journal
dealing with reading without finding applications of linguistics.

I started with a few key assumptions:

Reading is language.
Readers are users of language.
Linguistic concepts and methods can explain reading.
Nothing readers do is accidental. It all results from
interaction with text.

As my work progressed, I came to realize that reading is a
psycholinguistic process, one in which thought and language
interact. I realized that readers seek meaning, that as they
read they are engaging in *comprehending*, constructing mean-
ing through interaction with print.

The vehicle I chose to examine reading was simple: have
subjects read orally whole, real, language texts they hadn't
seen before and then analyze what they did as they read. What
readers did was produce miscues; not everything matched what
was expected; some of the responses were unexpected. But
the unexpected responses showed the reader at work. Through
these miscues we could see reading *in process*.

The analysis of these miscues led to my conclusion that read-
ing could be characterized as a 'psycholinguistic guessing
game.' The reader makes minimal use of cues, engages in

tentative information processing, predicts, samples, confirms or disconfirms and reprocesses or corrects when necessary. The reader is actively seeking to make sense of written language.

These concepts are the core of the theory of reading that I have developed. This reading theory and the model that represents it have been continuously developed in interaction with the analysis of miscues of real readers reading different texts. The model is a macro model, that is, it attempts to deal with the whole of the reading process.

As linguists, psycholinguists, and cognitive psychologists began to turn their attention to reading, they brought to some of the phenomena of reading new terminology which has been applied by others to my theory. It has been characterized as an analysis-by-synthesis view, and inside-out view, and a top-down view. None of these are terms that I have used myself. While each, depending on whose definition you use, has some applicability, none captures the essential meaning - seeking, interactive essence of the theory.

I was, and have remained through all my work, an educationist and a teacher educator. This volume focusses mainly on theory and research. But the reader should understand that my constant motivation has been to understand reading and other language processes in order to contribute to the improvement of teaching and learning.

That may explain why I can not be satisfied with limited research designs or perspectives with leaps from laboratory experiments to methods and materials. It may explain my insistence on a reality base for assertions about reading and learning to read.

A primary motivation for bringing this volume together is to make my work more accessible to the field. Perhaps because my work has been widely quoted in recent years, many references and treatments of my ideas are now being based on secondary sources rather than my own statements. It is hoped that greater accessibility will make it possible for readers to check out representations and characterizations of my beliefs and convictions themselves.

Publication, like all language activity, involves risk-taking. Every author must wonder, as I have, whether some day he or she will regret having made public statements he or she no longer believes. But it is only through public interchange of ideas that growth in any field or in the individuals involved takes place. In my own case, the response to my published work has done a great deal to shape and encourage it. As I read through the papers included in this volume, there were certainly times when I encountered statements I would no longer make in the same way today. Usually that was due to development and refinement of my position. Sometimes, however, an early exploration has given way to a view that is quite different. Just for example:

1 My early uncertainty about the need to go from print to sound in reading has given way to a deep conviction that reading and listening are parallel processes with no necessary recoding.
2 My early belief that dialect divergence contributes barriers to reading comprehension has been disproven by my own research.
3 It has taken me a long time to fully purge from my view of reading the preoccupation with words which I feel still pervades the field.

Fred Gollasch was of inestimable help to me in selecting these articles. He brought an outside perspective which we hope has made it possible to avoid unnecessary overlap and to make the delicate decisions of which works are sufficiently obsolete that they might cause confusion if included.

A colleague recently shared with me a statement from William James cited by Abraham Kaplan, which in some sense seems to parallel closely some of the reactions to my work over the years. At the risk of seeming immodest, I offer it here:

The three classic stages of a theory's career. First a new theory is attacked as absurd; then it is admitted to be true, but obvious and insignificant; finally it is seen as so important that its adversaries claim that they themselves discovered it.

Kenneth S. Goodman
Tucson, Arizona
February, 1979

ACKNOWLEDGMENTS

INTRODUCTION
Psycholinguistics and Reading:
The Work of Kenneth Goodman

Kenneth Goodman has now been investigating the oral reading behavior of children for over a decade and a half, and there can be little doubt that his work has had a powerful impact on the field of reading and on education in general. His interest in reading was first sparked during the early 1960s by the contradiction he saw between the lip service being paid to the importance of comprehension by the authorities of the day and the lack of consideration for comprehension in their reading programs. From his first sample study of children reading in 1963,[1] through the subsequent tens of thousands of miscues analyzed from a wide range of readers of differing ages and backgrounds, his insights have made significant contributions to our understanding of the reading process.

The development of the technique of miscue analysis as a research tool and as a diagnostic instrument has been important, but there can be little doubt that Goodman's greatest contribution has been his development of a coherent, unified model of the reading process. This model grew directly from observations of children reading and has had considerable influence on traditional views of reading and of readers. The impact of this work is evident in any review of the literature in reading as well as in a wide spectrum of subjects relevant to language and to language education.

This impact will continue to grow because of a number of principles and attitudes that underlie the Goodman work and that set it apart from most traditional research. Features of his work include:

1 The utilization of a broad range of scientific knowledge from various disciplines in the formulation of a theory of reading.

2 The utilization of descriptive research that observes what the reader is doing in as natural a setting as possible.

3 The insistence on integrating research and theory. Goodman sees theory *not* as being simply the end product of research, but the operational base from which research evolves. The research then in turn adds to and modifies the theory.

4 The use of whole stories, in an attempt to eliminate some of the problems of using short or fragmented text.

5 Detailed and complex data recording which allows a broad holistic view of the ongoing process in context, as well as a flexibility of focus.

6 A positive view of all children as competent language learners that focusses on their strengths and accomplishments rather than their weaknesses and failures.

These principles and attitudes are positive factors that have contributed to the relevance and accuracy of Goodman's research findings. These findings are being verified by continuing research in many countries, across ages and languages, providing mounting evidence that there is one reading process as described by the Goodman model.

There can be little doubt that the contribution of the work of Kenneth Goodman to the field of reading research and theory is a great one, but the full importance of his work will only be able to be fully assessed some time in the future.

This review of his work is an attempt to present, in one chapter, an overview of his understanding of the reading process; what led to the development of that understanding; and the implications of his work for education. First, however, it will be helpful to take a brief look at the development of psycholinguistics which is the framework through which Goodman operates.

THE DEVELOPMENT OF PSYCHOLINGUISTICS

Psycholinguistics (a blend of the terms psychology and linguistics) is a discipline concerned basically with the interaction between thought and language. During the mid-1950s, there was a revival of interest in language by psychologists who came to see that human language is very closely linked to understanding, and thus to cognitive processes. Some linguists welcomed this interest in the belief that psychology may contribute something to their study of language processes. This marked the humble beginnings of psycholinguistics.

Psycholinguistics has led to new insights into the reading process through new perspectives. These new insights have come largely from a careful application of the systematized knowledge about language provided by the science of linguistics. Up until recently, this systematized knowledge was not available and could not be used to understand reading.

Psycholinguists make a powerful claim for their position. They claim that in order to understanding reading, one must view it from a psycholinguistic vantage point because reading is a psycholinguistic process, one in which there is an interaction between thought and language, and therefore, all the central questions involved in reading are really psycholinguistic ones (Goodman, 1976, p.6).

THE GOODMAN ORIENTATION

It is important to understand that Goodman's psycholinguistic
orientation is not only different from traditional views of the
reading process, but it is the prime base - together with his
'naturalistic' approach to research - from which stem the
insights that have made possible his significant contributions
to the field of reading. Goodman observed children reading in
a situation that eliminated the unnatural as much as possible.
His claim is that 'we worked with real kids reading real books
in real schools ... everything we know we have learned from
kids' (Goodman, 1973, p.3).

Unlike many experimental researchers who undertake a narrow
study of some process of instruction, Goodman collected data
that was concerned with what children were doing when read-
ing. He collected the 'whole' data that was embedded in a
meaningful language context and studied that data in order
to gain insight into the reading process. He then utilized the
insights gained to develop a model of the reading process. His
view, then, is a very broad one that attempts to encompass the
whole of the complex reading process.

This approach makes his position somewhat more vulnerable
than that of empirical researchers whose studies are narrow and
supposedly 'neat,' and leaves him open to much criticism. He
welcomes constructive criticism (Goodman, 1970, p.135) because
he knows that it will lead to better understanding, but his work
has often been criticized as being unscientific. Goodman dis-
agrees. He responds, 'All scientific investigation must start
with direct observation of available aspects of what is being
studied. What distinguishes scientific from other forms of
investigation is a constant striving to get beneath and beyond
what is superficially observable' (Goodman, 1975, p.20).

Goodman has used the observation of oral reading as his
source of data, believing it to be a valid means of getting to
the reading process, by comparing the oral reading to the
written text. His rationale is that the oral response is generated
while meaning is being constructed, and therefore, provides
a powerful means of examining process and underlying com-
petence (Goodman and Goodman, 1977, p.318).

However, Goodman believes that very little can be learned
from such observation if a naively empirical position is main-
tained:

> As the chemist must peer into the molecular structure, as
> the astronomer must ponder the effects of heavenly bodies
> on each other, as the ecologist must pursue the intricate
> web of interrelationships in a biological community, so the
> scientist in dealing with reading must look beyond behavior
> to process. Understanding reading requires depth analysis
> and a constant search for the insights which will let us
> infer the workings of the mind as print is processed and

meaning created. (Goodman, 1975, p.20)

The depth is provided by the tool that Goodman has devised - miscue analysis.

MISCUE ANALYSIS

A miscue is defined as 'an actual observed response in oral reading which does not match the expected response' (Goodman, 1973, p.5), and has often been described as a window on the reading process. Goodman does not consider miscues to be errors because they reveal more about the learner's strengths than his weaknesses. He believes that 'they are the best possible indicators of how efficiently and effectively the reader is using the reading process' (Goodman, 1974, p.7).

In miscue analysis readers' observed responses (oral readings) are compared to the expected responses (the written material) to provide a continuous basis of comparison that gives insights into 'the reader's development of meaning and the reading process as a whole' (Goodman and Goodman, 1977, p.320). The necessary requirements for conducting miscue analysis are outlined by Goodman:

> The written material must be new to the readers and complete with a beginning, middle, and end. The text needs to be long and difficult enough to produce a sufficient number of miscues. In addition, readers must receive no help, probe, or intrusion from the researcher. At most, if readers hesitate for more than thirty seconds, they are urged to guess, and only if hesitation continues are they told to keep reading even if it means skipping a word or phrase. Miscue analysis, in short, requires as natural a reading situation as possible. (Goodman and Goodman, 1977, p.320)

Miscue analysis was first used in 1963 (Goodman, 1965). Goodman was attempting to understand the reading process by giving subjects stories to read orally, and two things very quickly became clear:

> First, it was obvious that oral reading is not the accurate rendition of the text that it had been assumed to be. Readers, even good ones, make errors. Second, it was clear that linguistic insights, scientific views of language, were very much appropriate to describing reading behavior. The things the readers did were linguistic things - they were not random. (Goodman, 1973, p.5)

What was happening was that readers were showing their natural competence as language users.

Since those first discoveries, Goodman has always viewed

reading as a language process. He sees it as the receptive
aspect of written language and thus the parallel process to
listening. He regards the reader as a user of language, one
who constructs meaning from written language (Goodman, 1976,
p.1). He believes that in literate societies there are four lan-
guage processes: speaking, writing, listening and reading.
'Two are productive; two are receptive. Reading is no less a
receptive language process than listening is' (Goodman, 1975a,
p.627). After a decade and a half of research, Goodman's
claim is that everything he and his co-workers have observed
among readers of all levels of proficiency supports the validity
of that assumption (Goodman and Goodman, 1977, p.317), and
because reading is language[2] he believes that 'the teaching of
reading must be based on the best available knowledge of
language' (Goodman, 1964, p.355).

Because Goodman believes that reading is an active process
in which the reader is interacting with the writer through
print, he sees miscues not simply as errors, but as observable
responses that are caused by and reflect the psycholinguistic
process in which he is engaged (Goodman, 1974, pp.6-7). This
position has two important implications. It separates Goodman
from those who hold the simplistic view that reading must be
accurate, and it changes the view from a negative one where
errors are seen as undesirable, to a positive view of miscues
as by-products of the reading process (Goodman, 1976, p.2).

In his early studies of miscues Goodman's search and dis-
covery are best described in his own words:

> I naively looked for easily identified cause-effect relation-
> ships. For each miscue I looked for some one cue. In this I
> was operating as others had done in research on error
> analysis. The difference was that I was using scientific lin-
> guistics to categorize the phenomena. So when I found my-
> self saying a miscue had a graphic cause, I found myself
> aware that there also were grammatical relationships invol-
> ved: 'lad' and 'lady' look quite a bit alike but they are also
> both nouns and they have related meanings. Both are kinds
> of people. So if a reader substitutes 'lady' for 'lad' which of
> these factors is the cause? I was led then to the development
> of an analytic taxonomy which considers the relationships
> between the expected response (ER) and the observed
> response (OR) from all possible angles. (Goodman, 1973,
> p.6)

Goodman had come to the point of understanding that it was
necessary to look at the whole process of reading if one wanted
worthwhile answers. The problem was, however, that the read-
ing process and children's miscues were so complex as to demand
a theoretically based framework by which the phenomena might
be intelligibly described (Goodman and Burke, 1970, p.121).

THE TAXONOMY

Since 1965 Goodman has developed and is continuing to refine a taxonomy on the basis of his descriptive studies. Each miscue is examined carefully by asking a number of questions about the relationships of the expected to the observed response. The structure of the taxonomy is necessarily complex, relying on answers to approximately twenty one questions for each miscue, the reason being that it is not possible to explain complex processes with simplistic descriptions.[3]

Miscue analysis using this taxonomy is most suited to depth research on small numbers of subjects and what emerges for each subject is valuable information on the 'patterns of how the cuing systems are used in on-going reading' (Goodman, 1976, p.4). A simplified form of miscue analysis called the Reading Miscue Inventory (RMI) has been developed by Yetta M. Goodman and Carolyn Burke, utilizing the most significant questions from the taxonomy. This is gaining wider acceptance among classroom teachers and clinicians as a diagnostic tool, but is also a very valuable means of gaining insights into the reading process of individuals. For this reason it is proving helpful in teacher education. Other more simplified forms of miscue analysis have been developed by a number of people, but it is important to realize that there is a direct relationship between the simplification of the form and the loss of information about the subject's reading strategies.

INSIGHTS FROM MISCUE ANALYSIS

A decade and a half of miscue analysis across many age, dialect and language groups in many parts of the world has contributed many important educational insights. One of the most important is the respect that all educators need to have for the language learning ability of children.

A young child's ability to handle spoken language, to understand others and be able to generate sentences that he or she has never heard before is impressive. Goodman explains it in these words:

Each child creates language for himself, moving toward the language forms of his community, as he strives for effective communication. His success is so obvious that it is taken for granted by most adults. By the time a child is five or six, regardless of the culture into which he is born, he is fully competent to use his mother tongue to meet his own needs in communication, thought and learning. And he has the ability to continue developing language as he grows and learns and as his needs become more complex. (Goodman, 1969, p.1)

Because of the child's natural ability to handle language, some linguists believe that the child's language ability is innate. Goodman believes that human infants are born with the capability for language and the need to communicate (Goodman, 1969a, p.137).

Many examples of young children's miscues contained in the Goodman writings reveal the complex processes that are being handled by young readers indicating that they are indeed competent language users. There are important implications here for the teaching of reading. Goodman says, 'We know a lot about a kid's ability to use language now but it all adds up to one thing. If you're going to teach kids to read you're going to have to show a healthy respect for the prodigious language achievements and language learning ability of the human young' (Goodman, 1974, p.3).

THE GOODMAN MODEL OF READING

The insights gained from miscue analysis have been used by Goodman to develop a model of reading commonly referred to as the Goodman Model of Reading. Goodman defines reading as 'a psycholinguistic process by which the reader, a language user, reconstructs, as best he can, a message which has been encoded by a writer as a graphic display' (Goodman, 1970, p.135). On a number of occasions, he has described the reading process as 'a psycholinguistic guessing game,' a brief but apt summary of his theory of reading which, like the reading process itself, is complex and involved.

Goodman believes that three sources of information are available to the reader: 'One kind, the graphic information, reaches the reader visually. The other two, syntactic and semantic information, are supplied by the reader as he begins to process the visual input' (Goodman, 1973, p.9).

If he is to be successful, the reader must comprehend, 'he must be actively involved in the reconstruction of a message' (Goodman, 1976, p.5). The task, Goodman says, 'is not to hear the word or recognize the word or name it. The task is to get the underlying structure, to get at the meaning, and to constantly keep the meaning in mind' (Goodman, 1971, p.7). Because the reader's aim is meaning, he uses as much or as little of each of the three kinds of information as is necessary to get the meaning (Goodman, 1973, p.9). Miscue analysis has revealed that 'all three systems are used in an integrated fashion' (Goodman and Goodman, 1977, p.331). This 'dynamic interaction between the reader and the written language' (Goodman and Goodman, 1977, p.322), is best described in Goodman's own words:

He makes predictions of the grammatical structure, using the control over language structure he learned when he learned oral language. He supplies semantic concepts to get the mean-

ing from the structure. In turn, his sense of syntactic struc-
ture and meaning make it possible to predict the graphic in-
put so he is highly selective, sampling the print to confirm
his prediction. (Goodman, 1973, p.9)

Thus prediction and confirmation (according to Goodman) are
two basic processes involved in reading. A third is the process
of correction. If the prediction or hypothesis that was made
during reading was not confirmed, and the reading did not make
sense semantically and/or syntactically, then it is likely that
the reader would regress to correct the prediction in order to
get to meaning by reprocessing the available cues. Throughout
the reading process, the efficient reader is constantly sampling
the print, using a minimum of information to get to meaning.
Therefore, apart from the obvious stages of initiating and
terminating the reading task, there are four main processes
visualized in the Goodman model, those of sampling, predicting,
confirming and correcting. The integrated picture is well
described in the following passage:

> Readers develop sampling strategies to pick only the most
> useful and necessary graphic cues. They develop predic-
> tion strategies to get to the underlying grammatical struc-
> ture and to anticipate what they are likely to find in the
> print. They develop confirmation strategies to check on the
> validity of their predictions. And they have correction
> strategies to use when their predictions do not work out and
> they need to reprocess the graphic, syntactic and semantic
> cues to get to the meaning. (Goodman, 1973, p.9)

Goodman also believes that reading can be usefully repre-
sented by a series of cycles - optical, perceptual, syntactic and
meaning cycles which are employed more or less sequentially
throughout a story or text, but they may be telescoped if the
reader is able to leap ahead to meaning (Goodman, 1975, p.23).
Most of Goodman's research is reported in three large studies
conducted for the US Department of Health, Education and
Welfare published in 1968, 1973 and 1978. However, his con-
ceptual writings are supported by and punctuated with miscue
research data. Although space does not permit the inclusion
of data here, the following is a description of some of the pro-
cesses involved in one girl's reading miscues, which will illu-
minate what has been said thus far:

> Peggy's performance allows us to see a language user as a
> functional psycholinguist. Peggy's example is not unusual;
> what she does is also done by other readers. *She processes*
> *graphic information*: many of her miscues show a graphic
> relationship between the expected and observed response.
> *She processes syntactic information*: she substitutes noun
> for noun, verb for verb, noun phrase for noun phrase, verb

phrase for verb phrase. She transforms; she omits an inten-
sifier, changes a dependent clause to an independent clause,
shifts a 'wh-' question sentence to a declarative sentence.
*She draws on her conceptual background and struggles toward
meaning, repeating, correcting and reprocessing as neces-
sary.* She predicts grammar and meaning and monitors her
own success. She builds and uses psycholinguistic strategies
as she reads. In short, her miscues are far from random.
(Goodman, 1977, p.319; emphasis added)

In summary, then, reading is seen by Goodman as a process
in which three types of information (graphophonic, syntactic,
and semantic) are dealt with in an integrated way through the
processes of sampling, predicting, confirming and correcting
with the primary aim of getting to meaning. The reader is seen
as a user of language, seeking meaning, interacting with the
graphic input as he 'concentrates his total prior experience and
learning on the task, drawing on his experiences and the con-
cepts he has attained as well as the language competence he
has achieved' (Goodman, 1969b, p.15).

PREMISES

There are a number of important related premises that need to
be dealt with in this discussion of Goodman's work. Some of
them have been touched on already, but it will be helpful to
list them here:

Premise 1 *Reading is a language process.*
Goodman believes that there are four language processes:
writing, reading, speaking, and listening. He argues that
reading 'is no less a receptive language process than listening
is' (1975, p.627). The traditional view (very much influenced
by some linguists) is that written language is really a second-
ary, more abstract representation of 'real' language which is
oral language.
   Recent evidence suggests that young children are learning
to read from exposure to print in the environment long before
their parents or teachers are aware that they are becoming
literate, and they are learning in much the same way that they
are learning to speak (Goodman and Goodman, 1976, p.2).

Premise 2 *Reading is a psycholinguistic process.*
If one accepts that reading is a language process, it is logical
to argue that reading is an interaction between language
and thought, and it follows that adequate answers to important
questions will not be found if we do not view reading in this
light.