

UNDER- STANDING

Understanding READING

Sixth Edition

READING

SIXTH EDITION

Frank Smith

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UNDERSTANDING READING

A Psycholinguistic Analysis of
Reading and Learning to Read

FRANK SMITH



2004

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SIXTH EDITION

UNDERSTANDING READING

A Psycholinguistic Analysis of
Reading and Learning to Read

Preface to the Sixth Edition

Here are extracts from the reports of two anonymous reviewers of the fifth edition of *Understanding Reading*:

Reviewer 1: *"Frank Smith's research summarizes a generation of investigations across disciplines In one succinct, readable volume it comprises what I consider a thorough and incisive summation of core research, theory and interpretation. It represents a new mainstream in progressive reading research Its major strength is its straightforward, compelling presentation of approaches to reading and writing that are meaningful and salient to children."*

Reviewer 2: *"This volume contains partial truths, contradictions, and cites only references that support the author's view. Either the author is not familiar with the current research literature, or he deliberately avoids citing evidence that is contrary to his point of view This book is no recipe for improving reading skills of children, especially beginning readers and poor readers; it is a recipe for disaster."*

Both reviewers are professors at university schools of education, experts in the field, with access to the same professional literature and with the same professional concerns. Yet a chasm separates

their points of view, one of which is expressed with vehemence and indignation.

This head-on clash of attitudes currently permeates every aspect of theory and research into reading and reading instruction, among practitioners, politicians, and the general public. It has become a focus of legislation and litigation. One has to turn to religious fundamentalism to find another issue that arouses such bitter controversy. There is no other academic discipline where so many people claim sole possession of truth and declare those with a different point of view “unscientific.”

The first edition of this book, in 1971, set out to be an objective (and scientific) review of every field of study that had anything relevant to say about reading and about learning to read, with the uncomplicated aim of “understanding reading.” Every edition, including the present one, has steadfastly resisted giving teachers a recipe for teaching reading while aiming to help them make their own decisions, based on research about reading, which is accessible to anyone, and their experience and personal knowledge of their students, which only they possess.

But it is impossible to write a book about reading, however detached the intention, without being caught in the cross fire of how reading should be taught. I have never professed any doctrinal allegiance, yet people who believe one thing accept this book as support for their point of view while those who take an opposing position anathematize it.

Who is right? I don't think that's a useful question at present. Each side believes it has the monopoly on truth, and few of the major protagonists would even consider the possibility of being wrong. If a crucial experiment or unanswerable argument existed, one side would have disappeared from the scene years ago.

A better question might be, what constitutes the grounds for people on both sides to feel so sure they are right and the other side wrong? That is the issue I focus on as I endeavor to bring the latest edition of *Understanding Reading* up to date.

But because of the clamor of the controversy it is not enough for me to lay out the facts of reading and learning to read as I see them. The controversy itself must be examined, to ascertain why such extreme divergences of opinion can come about. All teachers of reading, and ultimately all parents and other interested observers, must make up their own minds about why these conflicting points of view exist, unless they blindly submit to the assertions of the people who shout loudest or wield the biggest sticks (or carrots). That is the reason I include a brief statement of “issues” at the end of every chapter.

THE GREAT DEBATE

The fifth edition of *Understanding Reading*, published in 1994, included a lengthy summary of the “Great Debate” then raging between proponents of “whole language” and those of “direct instruction.” I commented that it would be comforting not to have to include the section in a sixth edition, but that the portents were not auspicious.

My prognostication was correct, but not quite for the reasons I anticipated. If the great debate no longer has the same intensity, it is because direct instruction carried the day. Whole language has been sidelined rather than vanquished. The direct instructional view, with its assumption that reading is a matter of decoding letters to sounds, has been taken for granted by those arguing for accountability, standardization, high-stakes testing, and external control of classroom instruction and teacher education, from the highest political levels down. In many parts of the English-speaking world—particularly the United States, Britain, Canada, Australia, and New Zealand—whole language (or “real reading”) has become a subversive, underground movement. Resistance to the control exercised by mandated tests and curriculums has become more of a confrontation over teachers’ freedom in classrooms than over technical and philosophical issues related to reading instruction. Proponents of direct instruction concede that there must be a place—usually late in the course of instruction—for meaningful reading and for “teaching comprehension,” and whole-language teachers and theorists deny that they ever proposed abolishing all reference to phonics in teaching reading, only against giving phonics priority and predominance. The old schisms have been papered over, and a new dispute—it can hardly be called a debate—has arisen over political issues.

WHAT’S NEW?

What justifies a sixth edition of *Understanding Reading*? The facts are the same, but the perspectives are different. Many of the basic facts about the nature of reading have been known for at least a century but, as Edmund Burke Huey observed in 1908, disputes over them seem always fresh.

My regular excursions through mountains of related literature reveal that little of substance has changed since the first edition of *Understanding Reading* was published in 1971. The main controversies persist (what it means to be a reader, how written words are

recognized, and how reading should be taught), and the only consequence of continued research seems to be a hardening of positions. It is unnerving to discover that what were once seen as fresh approaches are now ancient dogmas, adopted or rejected by waves of new champions, sometimes with immoderate enthusiasm or intemperate scorn. No wonder teachers and students can be confused, if they expect either side of controversies to be proved right or to admit to being wrong.

This is clearly not a matter of “facts.” There is more evidence than anyone knows what to do with, but it comes into educational theorizing and policy as raw material, to be analyzed in different ways for different purposes. What matters is how facts are gathered, which facts are considered relevant, and how they are interpreted—all subject to personal predilection. There are no “pure facts”—their place in any theory is always determined by broader theoretical and political intentions. One issue that has particularly attracted my attention is the assertion, which I regard as ominous, that there is something unnatural about reading. I give this early attention.

Substantial portions of the present volume have remained unchanged through all six editions. I have again examined every word carefully and consider that these portions are indeed unchallengeable, at least without argument at the level of “Of course the world is flat. It’s obvious, isn’t it?” Other portions are, I think, equally supportable, but give rise to opposing points of view because of perceived instructional implications. I don’t want to claim absolute truth, because I am sure others will find better and more insightful ways of understanding reading in the future, although not, I suspect, in the way some current participants in the controversy vociferously claim that they are indubitably and everlastingly “right.”

I have added about 220 new references (having scrutinized perhaps 10 times that number) and removed about 500 of the older references. But I have refrained from replacing the old with the new just for the sake of “updating.” Where earlier studies remain unique or have been copied but not improved on, I have let them stand—they have stood the test of time. I don’t support claims that the “latest” research is always the most significant or the most reliable. Often it simply reflects current enthusiasms, special interests, and the predispositions of funding sources.

Apart from the introduction of a new chapter 1, I have not found it necessary to alter the order of chapters or the general thrust of the discussion. Most of the major changes have been to the notes rather than to the chapters. Writing remains a major topic that has

not been covered to the extent that it warrants, primarily because I discuss the subject at length in a companion volume, *Writing and the Writer* (Smith, 1994a).

I have continued to resist the tendency of new editions to put on weight with age, and the final product is 25,000 words slimmer than its predecessor. In the notes (starting on page 233) there is an explanation for why I have retained the word *psycholinguistic* in the subtitle to this book, despite considerable changes in its use since I first employed it. There is also an important acknowledgment.

TEACHERS MUST DECIDE

In acknowledging alternative points of view, I have not concealed my own position, and I certainly cannot claim to give opposing beliefs a comprehensive hearing in this book (although there are plenty of other books around that do that). But when it comes to the point, teachers and students must make up their own minds, which is something I said way back in the first edition.

We live and learn in a world where no final answers are guaranteed, and must make profound decisions for ourselves (even if only to accept unquestioningly the opinions or decisions of someone else). Throughout their professional lives, teachers are confronted by conflicting points of view, frequently urged with compelling authority and conviction, and they must be able to take a position. The first responsibility and right of all teachers and students must be to exercise independent thought—although in their own education they are often denied that opportunity with rationalizations that they “aren’t ready,” “shouldn’t be confused,” or “lack thinking experience” (Smith, 1990, 1993).

Reading is complex, but so also are walking, talking, and making sense of the world in general—and children are capable of achieving all of these, provided the environmental circumstances are appropriate. What is difficult to describe is not necessarily difficult to learn. One consideration that this book emphasizes is that children are not as helpless in the face of learning to read as often is thought.

Because an understanding of reading requires acquaintance with research in a variety of disciplines, more than half of the book is devoted to such general topics as language, memory, learning, the development of spoken language ability, and the physiology of the eye and brain. The aim is to make these topics comprehensible, with the assumption that many readers will have neither the time nor the ex-

perience to undertake deep or specialized study in these areas. At the risk of offending specialists, diverse subject areas have been covered only to the extent that they are relevant to reading.

Not all readers automatically consult notes that are mentioned in the text, and few probably go on to plough through the mass of notes at the end. But I have preferred to keep the main part of the book compact and coherent, without lengthy digressions. The notes remain supplementary resources.

In general, this book is designed to serve as a handbook for language arts teachers, a college text for a basic course on the psychology of reading, a guide to relevant research literature on reading, and an introduction to reading as an aspect of thinking and learning.

—Frank Smith

Notes to the Preface begin on page 233 covering:

Psycholinguistics and cognitive science

Research

Acknowledgment

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1 The Essence of Reading

Proponents of direct, intensive, and early phonics training for teaching reading (like Reviewer 2 in the preface) partly justify their beliefs by asserting that unlike learning spoken language, learning to read is not “natural” and that reading itself is an unnatural activity. This book takes a contrary position.

READING THE WORLD

I’ll start my discussion of reading with a psychological point. Nothing is unnatural in the eyes of infants. Everything they encounter in the world is natural, even if they find it aversive. The arbitrary division of the world into what nature once provided and what people have subsequently done to it is something that has to be learned. Other creatures never make such a distinction. I doubt whether crows have different categories for cars and houses than they do for rocks and trees. Deer are unlikely to think “Here’s where nature ends” when they cross from forest glade to cement highway. “Unnatural” is a concept that doesn’t exist outside language.

So what is written language? For a child, print is just another facet of the world, not yet comprehended perhaps, but not different from all the complex sights, sounds, smells, tastes, and textures in the environment—not especially mysterious or intimidating.

And what do infants do when they are born into this wholly natural world? They do as they will for the rest of their lives: They try to make sense of it, to discover how it relates to everything else that they know, to understand its relationship to them, its “meaning.” Trying to make sense of any facet of the environment, including print, is a natural activity.

How exactly do infants (and adults) strive continually to make sense of everything they encounter in the world? They *read* it. Reading is the most natural activity in the world.

I am not taking liberties with language here. The word “reading” is properly employed for all manner of activities when we endeavor to make sense of circumstances; its original meaning was “interpretation.” We read the weather, the state of the tides, people’s feelings and intentions, stock market trends, animal tracks, maps, signals, signs, symbols, hands, tea leaves, the law, music, mathematics, minds, body language, between the lines, and above all—a point I must come back to—we read faces. “Reading,” when employed to refer to interpretation of a piece of writing, is just a special use of the term. We have been reading—interpreting experience—constantly since birth and we all continue to do so.

What is this basic reading or “making sense” that we all engage in? I don’t think it needs to be explained, or even can be explained. It is what we are. Anyone who didn’t try continually to make sense of the world could not be considered a functioning human being. Making sense is a matter of interpreting, relating the situation you are in to everything you know already. Not to part of what you know, but everything, because all our knowledge hangs together. Our understanding of the world, all of the world, is coherent, consistent, and immediate. Once you know that a flame burns, you don’t have to say to yourself, “That is a flame, therefore it burns.” You know that flames burn. Once you can recognize a truck, you don’t have to say to yourself “That is a truck” and consult some inner encyclopedia. Once you can read the written word “dog,” you don’t have to say to yourself, “That word says *dog*, I must look up what it means.” You know what it means.

What do children do when they encounter a dog? They don’t say “I recognize that animal with a particular juxtaposition of wet nose, sad eyes, and floppy ears as a certain kind of dog,” nor do they say “There’s a dog” to themselves and look up its meaning in a library in the brain. They certainly don’t wait to hear the animal bark to decide what it is. Recognition, whether of dogs and cats or written words, is not a matter of breaking something down to its components, but of integrating it into a larger context.

All learning and comprehension is interpretation, understanding an event from its context (or putting the event into a context). All reading of print is interpretation, making sense of print. You don't worry about specific letters or even words when you read, any more than you care particularly about headlights and tires when you identify a car.

The best strategy for determining the identity of meaning of an unfamiliar word is to work out what it is from context. As we shall see, this happens very quickly. An equally good way in different circumstances is simply to ask someone what it is. Often we don't have to ask. A very poor strategy is to try to "sound it out."

Some people seem to believe that learning to read is a particularly challenging undertaking—despite the ease with which many children accomplish it, and despite how much children have learned in other contexts. Learning to read is not rocket science.

No one could catalogue all the things a human being, even a young child, has been able to make sense of in the world; it would be an impossible task. We live in an enormously complex and complicated world, but the times when individuals are actually confused, even babies, are remarkably few. Children aren't usually confused by written language—until someone tries to *instruct* them on how to read. When people *help* children to read, by reading to them and with them, there is rarely confusion. It is not reading that many children find difficult, but the instruction.

Most of our learning is unsuspected. Perhaps the most complex learning of all involves the human face. Researcher Daniel McNeill (1998) explained how 22 pairs of facial muscles are constantly orchestrated to display at least four thousand different expressions, all produced and universally understood without any instruction at all. Some basic expressions of emotion—like fear, anger, surprise, disgust, sadness, and enjoyment—may be instinctive, but the majority are learned early in life. These expressions, involving the entire face from the corners of the mouth to the eyebrows, with each element operating individually, communicate not just physical states, but agreement, disagreement, encouragement, puzzlement, disbelief, collusion, threat, challenge—and of course interest and desire. When was anyone taught to interpret all this, to read faces? (Or to write on faces, for that matter.)

It is natural for children, and adults, to strive always to make sense of the world, to interpret what everything must mean. So why should language written in an alphabetic script be particularly difficult? The answer is that it isn't. Reading print is no more complex than reading faces, and other things in the world. Making sense of

print can't be more complicated than making sense of speech, which begins much earlier. Written words and spoken words share the same kind of grammar, meanings, and other structures. If we can make sense of all the words of spoken language that we know, we can do the same for written words. The actual numbers involved fade before the vast numbers of faces, places, objects, events, expressions, and relationships that we can make sense of in the world. Memory is hardly a problem. Written words are actually easier to discriminate than speech—we can mishear what someone says, or be unable to recover from a lapse in concentration; in writing we can always check back. Some written words are easier to discriminate than the objects they refer to. Participants in a scientific experiment could identify words flashed on a screen faster than they could identify drawings of the objects the words referred to (like house, dog, flower, and so forth), even after extensive practice on the limited set of alternative words and pictures that were presented.

There is nothing unnatural about any of this, as I have maintained. Written language is no more opaque or impenetrable than anything else in the world, once we have made sense of it (because we have encountered it in circumstances that make sense to us).

So why do some people have so much trouble learning to read? The first reason might be that they are confronted by reading when it is not the best time for them to learn, just as not everyone learns to play the piano, to swim, or to play chess at the same time. They may be too involved in other things, or trying to recover from some trauma. Learning to read is not necessarily a problem at any age—unless there are years of reading confusion and failure in the past. Which leads to the second reason why some people have so much trouble learning to read. They've been confused. Instead of being helped, they've been handicapped.

People can be confused by anything. Difficulty in learning to read doesn't mean that it is unnatural (unless everything else that humans do that is not instinctual is regarded as unnatural).

Allusions to "scientific" studies don't prove a thing. If phonics is an impossible system, even for computers, then any experimental study claiming to show that phonic drills have helped children to read must have been looking at something else. In fact, many studies of phonics and phonemic awareness acknowledge that they *are* looking at something else. Instead of looking at reading as a matter of making sense of text, they look at how well children can put sounds to isolated words, and even to meaningless sequences of letters, to confirm that they use the alphabetic code. This is like tying children's feet together to prove they must jump before walking.

References to mythical brain disabilities (diagnosed circularly in relation to perceived reading difficulties) explain nothing. Such phantasms are conjured up in the absence of understanding or coherent theory. And even if there were rare brain malfunctions that make it difficult for a few children and adults to read, that doesn't mean that such individuals should be subjected to regimes of unnatural treatment. Such individuals must still be helped to make sense of print—but it will take more time and patience. Calling them disabled is hardly likely to help.

Reading print is as natural as reading faces. Learning to read should be as natural as any other comprehensible aspect of existence. How reading is naturally accomplished, and what can go wrong, are the twin concerns of this book.

DISENTANGLING THE UNDERGROWTH

To clear the ground for the rest of the book, I must deal with several matters that in my view contribute to confusions or misconceptions about the nature of reading. They concern (1) the alphabet, (2) language, and (3) the brain. I raise these issues now because to some extent they contradict what often seems obvious, and there is no point in trying to understand reading without first examining critically what many people may take for granted. The remainder of the book will develop the arguments.

The Alphabet

Ever since an alphabetic writing system was invented by the Greeks over two thousand years ago, the 26 or so letters have had a profound influence on human thought. Many people through the centuries have been fascinated by the letters that make up words, and the putative relationships of these letters to the sounds of speech. They cannot imagine reading without a central role for the letters that make up individual words. Reading instruction from Greek and Roman times has focused on letters and sounds, despite continual efforts by critics to emphasize the vital role of meaning in reading (Mathews, 1966) and to demonstrate that letters play only a small, redundant, and often confusing part. Letters have become a fetish. People transfixed by the alphabet ask incredulously what the purpose of letters might be if not to make it possible for readers to read.

But the alphabet was never designed to help readers. It was not invented or developed for that purpose. Nor was it intended to be of