

Reading and Wronging

How education has ignored the science of reading

**Language at the Speed of Sight:
How We Read, Why So
Many Can't, and What Can
Be Done About It**
by Mark Seidenberg

Basic Books, 2017, \$28.99; 384 pages.

As reviewed by Robert Pondiscio

Cognitive neuroscientists are the Cassandra of education.

Recall that in Greek mythology, Cassandra was blessed with the gift of prophecy by the god Apollo. But when she refused to sleep with him, Apollo didn't rescind the gift, he added a curse: poor Cassandra could still see the future, but she was doomed never to be believed. Mark Seidenberg probably *envies* Cassandra. He writes like someone who wonders exactly whom he has to sleep with to get people to pay attention to him.

Seidenberg is a University of Wisconsin cognitive neuroscientist who has been studying reading “since the disco era.” His indispensable new book, *Language at the Speed of Sight*, lays out in clear, readable English much of what we have learned over the past several decades about reading; he labors to “cheerfully destroy a few myths” about how we process and make sense of the printed word, but Seidenberg is no happy warrior. He wants his readers to share his fury at the “profound disconnection between the science of reading and educational practice” that he deftly unpacks.

The first two-thirds of the book covers the current state of reading science, starting with a brief history of human language development and the emergence of writing, “the first information technology.” Seidenberg then describes our current understanding of what happens when we read. “Skilled reading is

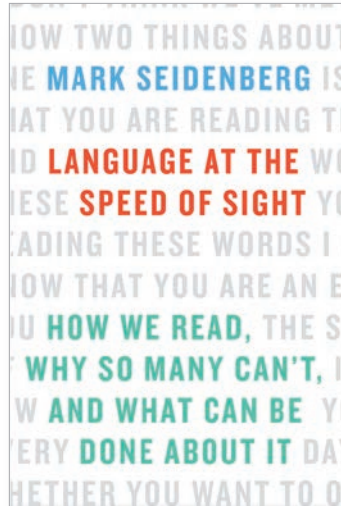
a specialized type of expertise that only some people possess. So is plumbing,” he dryly observes, before offering his “Proposed Requirements for Licensure as a Certified Skilled Reader.” The necessary expertise includes the “ability to recognize a large vocabulary of printed words quickly and accurately, including academic vocabulary” and the “ability to recognize lapses in comprehension and perform simple repairs.” The point of Seidenberg's droll exercise is “that expert reading is not an inscrutable art,” he writes. “The major qualifications can be listed. Having specified what skilled readers know and do, we can ask how they got there.”

As noted in its subtitle, the book also focuses on why so many of us *don't* get there. This is where the book really takes off—and takes no prisoners. In the last third of the book, Seidenberg launches a full frontal assault on what he derisively refers to as the “culture of education,” which contributes significantly to reading underachievement. By culture of education Seidenberg means “the beliefs and attitudes about how children learn, the role of the teacher, and the educational mission that dominate the schools of education, which are the main

pathway into the profession.” His critique is unsparing. “Parents who proudly bring their children to school on the first day of kindergarten are making a big mistake,” he writes. “They assume that their child's teacher has been taught how to teach reading. They haven't.”

Shortly after I began teaching as a provisionally certified elementary-school teacher, I remember counting myself lucky that I was assigned to teach 5th grade, since I hadn't been taught the first thing about teaching children to read. I was terrified that I would be found out and fired. It turns out I wasn't an outlier. “The principal function of schools of education is to socialize prospective teachers into an ideology—a set of beliefs and attitudes” that form the culture of education, Seidenberg writes. “Prospective teachers are exposed to the ideas of a select group of theorists who provide the intellectual foundations for this ideology.” Reading educators “rely on authorities whose names are not as well known as Dewey or Montessori but who play a similar role.” In a series of case studies, he singles out whole-language enthusiasts like the Harvard-trained Frank Smith and Kenneth Goodman of Wayne State University for promoting “balanced literacy” and encouraging generations of teachers to believe “that phonics is the route to poor reading.” He also lambastes the Reading Recovery remedial system invented by New Zealand educator Marie Clay.

“If the whole language/balanced literacy approach is as flawed as described, many children will struggle to learn,” Seidenberg insists. For those students, in thousands of U.S. schools, there is Reading Recovery, “an expensive remediation program based on the same principles. Fewer children would need



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Reading Recovery if they had received appropriate instruction in the first place,” he writes. As for teachers, they are “left to discover effective classroom practices [on their own] because they haven’t been taught them. One of the first discoveries is the irrelevance of most of the theory they have learned. Some of the concepts are impractical, or don’t work, or don’t work as well as something else, like instruction.”

Reading science has moved on, but education has not. Of course, people should not be faulted for having made erroneous claims decades ago, Seidenberg insists. “People *should* be faulted, however, for having made definitive claims based on weak evidence, for sticking with them long after they’ve been contradicted beyond reasonable doubt, and for continuing to market their stories to a trusting but scientifically naïve audience.”

The question that remains for those of us who lament the nation’s long-standing mediocre performance on international reading tests is how to shake education from its indifference, if not outright hostility, to science.

One significant weakness in *Language at the Speed of Sight* is Seidenberg’s relative inattention to reading comprehension and the role of background knowledge in helping children understand

what they read. The oversight is not entirely surprising, since Seidenberg is one of our leading experts on decoding. And while U.S. reading scores compare poorly to those in many other countries, decoding is a relative strength here, thanks to phonics, which, despite Seidenberg’s complaints, has made some headway in American classrooms.

Where we really fall down is in teaching children to read with *understanding*. That topic would provide plenty of ore to mine, should Seidenberg want to write a sequel. Our schools have improved some, but we have a long way to go in appreciating and valorizing the role of content in comprehension. And our teacher-preparation programs remain unaccountably indifferent to background knowledge as a driver of education inequity. It’s fair, I think, to suggest our schools of education spend too much time decrying achievement gaps, and too little addressing them. Our refusal to acknowledge and attack these knowledge gaps would be a fit target for Seidenberg’s wrath.

Indeed, wrath and outrage are the only sane and appropriate responses to the gulf between science and practice that, as Seidenberg notes, places millions of children at risk of reading failure, discriminates against poorer children, and discourages children who might have become successful readers.

Research on cognition, language, and learning is growing exponentially, as is work in neuroscience, behavioral and molecular genetics, and developmental neurobiology. These are “central topics in modern psychology and cognitive science,” Seidenberg writes—and the subjects our teachers-in-training should be studying. Instead, our schools of education continue to focus on 19th- and early 20th-century theorists such as Dewey, Vygotsky, Bruner, Piaget, and Montessori, still treating their work “as the source of axiomatic truth.”

In *Language at the Speed of Sight*, Mark Seidenberg, our Cassandra of reading, makes a deft attempt to shake our schools of education out of their indifference to the science of reading. I hope he succeeds, because children cannot thrive in school and beyond unless they first earn their “licenses” as proficient readers. What could be more important to our future?

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“Can anyone, anyone, tell me how a semicolon is used other than in emoticons?!”

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