E.D. HIRSH, THE KNOWLEDGE DEFICIT (BOSTON: HOUGHTON MIFFLIN, 2006).

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WHY DO WE HAVE A KNOWLEDGE DEFICIT?

THE ACHIEVEMENT CRISIS

THE PUBLIC SEES that something is badly amiss in the education of our young people. Employers now often need to rely on immigrants from Asia and Eastern Europe to do the math that our own high school graduates cannot do. We score low among developed nations in international comparisons of science, math, and reading. This news is in fact more alarming than most people realize, since our students perform relatively worse on international comparisons the longer they stay in our schools. In fourth grade, American students score ninth in reading among thirty-five countries, which is respectable. By tenth grade they score fifteenth in reading among twenty-seven countries, which is not promising at all for their (and our) economic future.[1] In the global age, a person's and a nation's economic success depend on high reading and/or math ability. We have learned from the phenomenon of outsourcing that those who have these abilities can find a place in the global economy no matter where they happen to live, while those who lack them can be marginalized even if they live in the middle of the United States.

That this crisis in American competence should have been a topic during a recent presidential campaign, even in the midst of terror threats, is a striking sign of its present importance to the Amer-

ican people — of our growing sense that we, like other peoples these days, must live by our wits. The reason that reading ability is the heart of the matter is that reading ability correlates with learning and communication ability. Reading proficiency isn't in and of itself the magic key to competence. It's what reading enables us to learn and to do that is critical. In the information age, the key to economic and political achievement is the ability to gain new knowledge rapidly through reading and listening.

The public's estimate of the great importance of reading skill is strongly supported by the research evidence. Students' scores in reading comprehension are consistently associated with their subsequent school grades and their later economic success. Under our current educational methods, a child's reading in second grade reliably predicts that child's academic performance in eleventh grade, quite irrespective of his or her native talent and diligence.[2] Long-range studies show that if children become skilled readers, the United States offers them a fair chance in life — probably more so than any other nation.[3] But that is a big if. Becoming a skilled reader — a skilled user of language — is not fast or easy. If it were, our schools would be enabling all our students to reach this goal, when in fact they are bringing fewer than half of them to reading proficiency.

Verbal SAT scores in the United States took a nosedive in the 1960s, and since then they have remained flat. Despite intense efforts by the schools, reading scores nationwide have remained low. An equally worrisome outcome of current school methods and the knowledge deficit they cause is the continuation of the large reading gap between demographic groups. While the origins of the discrepancy lie outside school, in the language that toddlers hear, our current educational methods have not been able to narrow that early gap, but instead have allowed it to widen as students move through the grades. Over the past decades, we have made little progress in bringing all social groups to a reasonable proficiency in reading comprehension. The average reading scores of Hispanics have hovered

some twenty-five points below that of whites, while scores of blacks are nearly thirty points below that of whites. These large gaps tell only part of the story: whites cannot read well either. More than half of them — some 59 percent — fail to read at a proficient level. For Hispanics, it is a depressing 85 percent, and for blacks it is a tragic 88 percent.[4]

Tragic is not too strong a word. Reading ability correlates with almost everything that a democratic education aims to provide, including the ability to be an informed citizen who can actively participate in the self-government of a democracy. What gives the reading gap between demographic groups a special poignancy is the dramatic failure of our schools to live up to the basic ideal of a democratic education, which, as Thomas Jefferson conceived it, is the ideal of offering all children the opportunity to succeed, regardless of who their parents happen to be. Reading proficiency is at the very heart of the democratic educational enterprise, and is rightly called the "new civil rights frontier."[5]

The Curse of Romantic Ideas

The reason for this state of affairs — tragic for millions of students as well as for the nation — is that an army of American educators and reading experts are fundamentally wrong in their ideas about education and especially about reading comprehension. Their well-intentioned yet mistaken views are the significant reason (more than other constantly blamed factors, even poverty) that many of our children are not attaining reading proficiency, thus crippling their later schooling. An understanding of how these mistaken ideas arose may help us to overcome them.

When I began college teaching in the 1950s, my academic specialty was the history of ideas. I also specialized in the theory of textual interpretation, which, reduced to its essence, is the theory of reading. So I became well versed in the scientific literature on lan-

guage comprehension and in American and British intellectual history of the nineteenth century. This double research interest prepared my mind for disturbing insights about American schooling. I saw that John Maynard Keynes's remark about the power of ideas over vested interests which I have used as an epigraph was profoundly right. Root ideas are much more important in practical affairs than we usually realize, especially when they are so much taken for granted that they are hidden from our view.

As I taught intellectual history, with a focus on writers like William Blake and William Wordsworth, my immersion in nineteenth-century romanticism gave me another insight into what had gone wrong in our schools. Our nation was born in the Enlightenment but bred in the Romantic period. Today we most often use the term *romantic* to refer to romantic love. But romanticism as a broad intellectual movement that has greatly influenced American thought has much less to do with romantic love than with a complacent faith in the benefits of nature. Such faith was the aspect of nineteenth-century ideas that powerfully influenced our young nation in its beginnings, and it still dominates our thinking about education and many other things.

Consider the idea that school learning, including reading, is or should be natural. The word *natural* has been a term of honor in our country ever since our forebears elevated "nature" and "natural" to a status that had earlier been occupied by divine law. Following the Colonial period, during the heady days of the early 1800s, the most influential thinkers in New England were no longer writers like Jonathan Edwards, who had exhorted us to follow the commandments of God's law, but writers like Emerson and Thoreau, who admonished us to develop ourselves according to nature. That was a hugely important shift in our mental orientation. Vernon Parrington titled the second volume of his massive intellectual history of the United States *The Romantic Revolution in America, 1800–1860,* and his use of the term *revolution* accurately estimates the fundamental change that took place in the American attitude to nature and to education.[6]

The fundamental idea of romanticism is that there isn't any boundary between the natural and the divine. Jonathan Edwards emphatically did not see nature and the natural as being either reliable or divine. In his famous 1741 sermon called "Sinners in the Hands of an Angry God," he cautions us against the sinful "natural man" and contrasts an imperfect "nature" with divine "grace," which is a special supernatural dispensation that sinful "natural man" must seek if he is to be saved.[7] In the nineteenth century, by contrast, American Romantics like Emerson, Whitman, and even our great educational reformer Horace Mann thought that if you followed nature, in life and in education, you really were following the divine. There were no natural sinners. Sin was a product of civilization. "Nature never did betray the heart that loved her," as Wordsworth wrote. To be natural was automatically to be good, whether in life or in learning.

Horace Mann is justly praised as the father of public education in the United States, and he rightly saw the need of our schools to bring all children, including recent immigrants, into the main stream of American life. But romantic ideas, especially the idea that nature is best, influenced his belief that the best way to teach early reading — sounding out words from the printed page — is by a "natural," whole-word approach.[8] The most important American thinkers of the nineteenth and early twentieth centuries, those who formed our current ways of approaching education and many other matters, believed that the natural cannot lead us astray. Today, when we invoke the word *natural* in this way, we continue to illustrate the powerful influence of romanticism on our thought.

Of course, historians don't always call these ideas romanticism. They have given them special American names. They call Emerson and Thoreau "Transcendentalists." They call John Dewey, the father of present-day American education, a "pragmatist" or a "progressive." But progressivism in education is just another name for romanticism. Within Dewey's writings about education beats the heart of a romantic, as indicated by his continual use of the terms *development* and *growth* with regard to the schooling of children — terms that

came as naturally to him as they still do to us. In fact, they come to us so unbidden that we do not even notice the fact that conceiving of education as "growth" on the analogy of a bush or tree is in many cases highly questionable, and is made to seem plausible only because children do indeed develop naturally, both physically and mentally, during the early years of schooling.[9] Being trained in the history of ideas, I had become familiar with the way in which unnoticed metaphors like "growth" and "development" unconsciously govern our thought — and continue to do so, even when scientific evidence clearly shows that reading and doing math are not natural developments at all.

My academic specialties thus freed me to think in new ways about what had gone wrong in our schools and to write my 1987 book, *Cultural Literacy,* which became a surprise bestseller. It was an enormously controversial book. Many classroom teachers and parents praised it as accurately describing the way in which knowledge-oriented teaching had vanished from the early grades. But coming at the height of fierce debates over multiculturalism and gender politics, it was damned with great hostility by cultural reformers and education professors as a reactionary tract aimed at preserving the intellectual domination of white Anglo-Saxon males, and as a means of boring children with mindless drills and stuffing them with "mere facts."

Its main argument, that reading comprehension — literacy itself — depends on specific background knowledge, was overlooked in the cultural taking of sides. The atmosphere seems different today. The intensity of identity politics has diminished. Existing instructional practices have not been working. National mandatory testing, which prods schools to achieve "adequate yearly progress" in reading, has highlighted the bankruptcy of prevailing ideas. The public increasingly understands that the knowledge deficit is a profound failure of social justice. Less understood is the fact that this failure is the consequence of good intentions in the service of inadequate ideas.

Should Schooling Be Natural?

The word *nature* has its root in the Latin word *natus* — birth, what organisms are born with. By the same token, the word *development* means an unfolding in time of what at birth we potentially contain. Yet the romantic concept of education as a natural unfolding — by far the most influential idea in the history of American education — has small basis in reality when it comes to reading, writing, and arithmetic. On current scientific evidence, the notion that the job of the schools is to foster the natural development of the child is only a half-truth.[10]

Let's ponder "development" for a moment. When a fertilized egg turns into an embryo, that development is indeed something that unfolds naturally. Similarly, in the first two years of life, when a child learns to walk and talk, those are natural developments that are universal in all cultures. Since the child acquires these extremely difficult skills often without conscious adult instruction, we might mistakenly extend trust in natural unfolding to the next stage of life, when a child enters school. And indeed, that is what educators do when they delay teaching the mechanics of reading until a child reaches a state that is deemed to be a developmental stage of "reading readiness." Before that time, children are not to be interfered with by premature and artificial teaching of letter-sound correspondences, because these are "developmentally inappropriate."

Extreme advocates of this viewpoint insist that children will learn to read as readily as they learned to talk. Similarly, the romantic complacency of American educational thought holds that children, given time, will develop a readiness to understand place value in arithmetic. The idea that children might naturally develop a readiness for either place value or the phonic code overlooks the glaring fact that we as a species might never have invented these things at all. Place value in base-ten arithmetic was a very unnatural invention of civilization that reached Europe even later than the alphabet did

— not until around the fifteenth century.[11] Alphabetic writing was a brilliant, momentous invention, and it was equally unnatural. Scholars are still debating whether or not alphabetic writing was invented only once in human history.[12]

If early childhood experts, liberated from the romantic traditions of American schools, had considered the matter from a historical or anthropological angle, they might have taken stock of the fact that reading is developmentally inappropriate at *all* ages of human life. There is little in the human organism that prepares us naturally for alphabetic reading and writing (decoding and encoding), which have been very late and rare attainments of civilization. The inherent unnaturalness of learning to read is part of the reason that it is at first so difficult and, for many, so painful. Shakespeare memorably captured the perennial unnaturalness of schooling in his picture of the "whining schoolboy" "creeping unwillingly to school."

What About "Mere Facts"?

A naturalistic approach to teaching phonics, under the idea that children are somehow wired to master the alphabetic code, is not, however, the most deleterious influence of romantic ideas in hindering the effective teaching of reading. The word *reading* has two senses, often confusingly lumped together. The first means the process of turning printed marks into sounds and these sounds into words. But the second sense means the very different process of understanding those words. Learning how to read in the first sense — decoding through phonics — does not guarantee learning how to read in the second sense — comprehending the meaning of what is read. To become a good comprehender, a child needs a great deal of knowledge. A romantically inspired, long delay in teaching phonics, until children are supposedly developmentally ready, as regrettable as it is, is not nearly as permanently harmful to our students economically and socially as the other aspect of the romantic tradition in education — its knowledge-withholding, anti-intellectual aspect.

Disparagement of factual knowledge as found in books has been a strong current in American thought since the time of Emerson. Henry Ford's famous dictum "History is bunk" is a succinct example. Since the nineteenth century, such anti-intellectualism has been as American as apple pie, as the great historian Richard Hofstadter has pointed out, and it came straight out of the Romantic movement into our schools.[13]

In our pre-romantic days, books were seen as the key to education. In a 1785 letter to his nephew, Peter Carr, aged fifteen, Jefferson recommended that he read books (in the original languages and in this order) by the following authors: Herodotus, Thucydides, Xenophon, Anabasis, Arian, Quintus Curtius, Diodorus Siculus, and Justin. On morality, Jefferson recommended books by Epictetus, Plato, Cicero, Antoninus, Seneca, and Xenophon's *Memorabilia*, and in poetry Virgil, Terence, Horace, Anacreon, Theocritus, Homer, Euripides, Sophocles, Milton, Shakespeare, Ossian, Pope, and Swift.[14] Jefferson's plan of book learning was modest compared to the proper Puritan education of the seventeenth century as advocated by John Milton.[15]

The Romantics rejected such advice. They opposed the reading of books as unnatural, as arising from the artificial habits and constraints of civilization. Wordsworth wrote:

> One impulse from a vernal wood
> Can teach us more of man
> Of moral evil and of good
> Than all the sages can.

Emerson claimed that the farm was a better teacher than the school: "We are shut up in schools and college recitation rooms for ten or fifteen years & come out at last with a bellyful of words & do not know a thing . . . The farm, the farm is the right school . . . The farm is a piece of the world, the School house is not."[16] John Dewey's Lab School, which he started in Chicago in 1896, was based on the conviction that

children would learn what they needed by engaging in practical activities such as cooking.

Today our schools and colleges of education, the inheritors of these ideas, are still the nerve centers of an anti-intellectual tradition. One of their most effective rhetorical tics is to identify the acquisition of broad knowledge with "rote learning" of "mere facts" — in subtle disparagement of "merely verbal" presentation in books and through the coherent explanations of teachers. Just like Rousseau, Wordsworth, and Dewey, our schools of education hold that unless school knowledge is connected to "real life" in a "hands-on" way, it is unnatural and dead; it is "rote" and "meaningless." It consists of "mere facts." But nobody advocates rote learning of disconnected facts. Neither Milton nor Thomas Jefferson nor any of their more thoughtful contemporaries who championed book learning advocated rote learning. What they did advocate was the systematic acquisition of broad knowledge. And such knowledge is precisely what it takes to become a good reader. Our unwarranted faith in nature — in the idea that so essential and unnatural a skill as decoding will occur mainly through natural development, or that needed knowledge will be imbibed naturally through hands-on experience, plus our faith that how-to strategies will lead to reading competence — have led to the mistaken dogma that reading is a formal skill that can be transferred from one task to another regardless of subject matter.

The factual knowledge that is found in books is the key to reading comprehension. A deficit of factual knowledge and the deficit in language it entails are the causes of the so-called fourth-grade slump that many children experience.[17] For some time now, researchers have observed this phenomenon. Jane scores well in reading in grades one through three but surprisingly begins to score badly in grade four. That's not because Jane suddenly took a backward step. It's because in the early grades she was mainly learning how to decode the printed marks easily and fluently, as reflected in her rising test scores. But in grade four, when Jane was given more challenging con-

tent to read in class and on tests, her limited comprehension of language began to show. It was not her fault. Her comprehension problem had been there but had gone unrecognized and untreated in the earlier grades. By fourth grade it is very late to correct it — a tragedy, because this failure most seriously limits her progress in later elementary grades, in middle school, in high school, and in later life. Children who lag in comprehension in early grades tend to fall even further behind in later years.[18] For children to make substantial progress in reading, they must make early and substantial progress in knowledge.

Is Knowing How Better than Knowing What?

If "mere facts" do not matter as much to the romantics as "real-world" experiences, and if book learning and a "bellyful of words" are not essential to education, then what is essential to education? Professional educators had to find some answer to justify schooling at all (*pace* Emerson), and they found it in the notion that certain subjects, like reading and math, are all-purpose, formal skills which, once learned, can be applied to all subjects and problems. This answer was given not only by the Romantics in the nineteenth and early twentieth centuries but also by their successors in our education schools today — that *how-to knowledge,* skills that are universally applicable to all circumstances of life, is the important thing to be learned. The various schools of "progressive" educational thinkers have agreed on this point. A specific, factual curriculum, they hold, is not needed for gaining all-purpose cognitive skills and strategies.[19] Instead of burdening our minds with a lot of dead facts, we should become expert in solving problems, in thinking critically — in reading fluently — and then we will be able to learn anything we need.

This idea, which I have called formalism, has a plausible sound to it. (If it did not seem reasonable and sound, it could not have so thoroughly captured the American mind.) Its surface plausibility de-

rives from the fact that a good education can indeed create skilled readers and critical thinkers. The mistake is to think that these achievements are the result of formal, all-purpose skills rather than abilities that are completely dependent on broad factual knowledge. While it is true that proficient reading and critical thinking are all-purpose abilities, they are not content-independent, formal skills at all but are always based on concrete, relevant knowledge and cannot be exercised apart from what psychologists call "domain-specific" knowledge. The only thing that transforms reading skill and critical thinking skill into general all-purpose abilities is a person's possession of general, all-purpose knowledge.[20]

Formalism in reading is the notion, powerfully dominant in our schools, that reading comprehension is a skill, like typing, that can be transferred from one text to another. Comprehension skill is said to depend on formal "comprehension strategies," such as "predicting, summarizing, questioning, and clarifying." This innocent-seeming idea affects classes all over the nation, depriving them of substance and intellectual structure.

Here's an example of how it affects real children in real classrooms. In May 2004, a front-page story in the *Washington Post* described the activities in a third-grade classroom at a public school in Maryland, which the reporter, Linda Perlstein, identified as being typical of activities "across the nation." Perlstein had been sitting in classrooms at the school, observing what went on and talking to students, teachers, and administrators. Her long report is useful reading for anybody who is interested in the practical consequences for American children of formalistic ideas about reading.[21]

The piece begins with a comment by one of the students:

> Here is 9-year-old Zulma Berrios's take on the school day: "In the morning we read. Then we go to Mrs. Witthaus and read. Then after lunch we read. Then we read some more."

These reading periods, Perlstein points out, come at the expense of classes in history, science, and art. The reading materials them-

selves are quite vapid. In this particular class, the children were reading a book about a grasshopper storm. But the point of the class was not to learn anything in depth about grasshoppers; the point was to learn how to ferret meaning out of a text by using formal "strategies."

> For 50 minutes, Tracey Witthaus pulls out a small group of third-graders — including Zulma — for Soar to Success, an intensive reading-comprehension program used at many county schools. Instead of studying school desegregation and the anniversary of *Brown* v. *Board of Education,* Zulma's group finishes a book about a grasshopper storm and practices reading strategies: predict, summarize, question, clarify. "Clarify," said Zulma, who began the year reading at the late first-grade level. "When I come to a word I don't know, I look for chunks I do. Reminded. Re-mine-ded."
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> "Clarify," said Zulma's classmate Erick Diaz, 9, who began the year reading at a second-grade level. "When I come to a word I don't know, I look for chunks I do. Hailstones. Hail-stone-s."

The theory behind these deadening activities is that learning comprehension strategies will give students a shortcut to gaining greater expertise in reading. Supposedly, learning such strategies will quickly provide the skills they need to comprehend unfamiliar texts. But as the teachers in the school pointed out to the reporter, the methods did not seem to be working. Reading scores were not going up significantly. Perlstein reports that "staff members said they aren't sure what they might be doing wrong."

It is not the school staff that is responsible for what is going wrong in the school but the incorrect ideas that have been imposed on the staff — the formalistic theory behind these dull activities. That theory was succinctly stated by the superintendent of the district: "Once they learn the fundamentals of reading, writing, and math, they can pick up science and social studies on the double-quick," said [the] superintendent. "You're not going to be a scientist if you can't read."

The idea that reading skill is largely a set of general-purpose maneuvers that can be applied to any and all texts is one of the main barriers to our students' achievement in reading. It leads to activities that are deadening for agile and eager minds, and it carries big opportunity costs. These activities actually slow down the acquisition of true reading skill. They take up time that could be devoted to gaining general knowledge, which is the central requisite for high reading skill. The staff at the school Perlstein visited is dutifully wasting large amounts of valuable time by following the mistaken advice put forth by reading experts and by various "research-based" reading comprehension programs currently on offer. What these students and their teachers mainly need is a revolution in ideas.

Is Society to Blame?

The failure of romantic ideas to improve educational achievement is an inevitable result of their scientific inadequacy and inaccuracy. Reading is not, as romantics hold, either a natural acquisition or a formal skill. But mere scientific inadequacy can be a practical irrelevance in American education. Professors, including those who teach our teachers, do not easily give up their long-asserted ideas, even under the pressure of unfavorable scientific evidence. As Max Planck once memorably observed, new ideas take hold only when the old professors retire or die.[22] If the professors continue to think that romantic educational ideas are not scientifically wrong at all but quite correct, then they must find some other cause to explain why our students are not learning to read well. This alternative cause is American society — its distractions and its inequities. Under this theory, even students from advantaged circumstances do not learn to read well because of the distractions of modern culture — video games, computers, television, the movies. But that part of the theory is readily disposed of by pointing to developed countries whose students read better than ours yet spend as much or more time on video games, computers, television, and the movies.[23]

The more significant part of the blame-society theory is the claim that social conditions *necessarily* keep poor blacks and Hispanics from reading well. This is the theory of demographic determinism, which holds that reading problems have their roots outside school, in economic and cultural conditions (which is initially true). But the theory then goes on to claim (falsely) that low test scores in reading are beyond the power of schools by themselves to overcome. The familiar argument runs this way: since the schools can't remove poverty, it's unfair to suggest that they can bring everyone to proficiency in reading. It is poverty that causes low reading scores. Only after greater social justice is attained can we make real gains in those scores. The most eloquent defender of this view is Richard Rothstein, a former educational columnist for the *New York Times*. Rothstein argues that blaming the achievement gap mostly on failing schools is a mistake, because it diverts attention from the need to improve the economic and social gaps between children that thwart academic potential long before school starts.[24]

I completely concur with the desire to gain greater equality of social circumstance for all children. But that pressing social goal does not have to be used as a distraction from our schools' failure to make a dent in the reading achievement gap between demographic groups. It does no practical good to attack the economic status quo by defending the educational status quo. If schools by themselves can do a far better job of narrowing the achievement gap in reading, that will be a supreme contribution to the social aims that Rothstein and many others desire.

The proof that schools can narrow the gap is that some have in fact done so, both in this country and elsewhere, as we shall see. But until wider progress in narrowing the reading comprehension gap between social groups is achieved by many, many more American schools, demographic determinism will continue to seem plausible. It is nonetheless a flawed and dismal theory, which, while conveniently exculpating the schools, undermines the founding principle of democratic education. Rothstein and others who hold to the idea of

demographic determinism might gladly abandon that view if our schools were able to make significant inroads into the current iron connection between reading scores and demographics. I will explain in this book how achievement in reading can be raised for all children and the test-score gap between social groups greatly narrowed at the same time.

Making Better Ideas Prevail

This book makes strong arguments against currently dominant ideas. But its criticisms pertain to ideas, not persons. There is far too much criticism of teachers and principals for poor educational outcomes that have little to do with their native abilities or their desire to help children and a lot to do with prevailing educational ideas. To those who argue that the solution lies in hiring better teachers, I respond that much of the talk about low teacher quality is misplaced. If teachers now lack the knowledge they need to teach reading and other subjects well, it is not because they are innately incompetent but because they have been trained under faulty romantic ideas about the nature of reading and the worthlessness of "mere information." Nor are the education professors who trained them natively incompetent. They too have been trained under faulty romantic ideas.

When I say that current external conditions are adequate for making a big improvement in reading, I have in mind, for one thing, the classroom time now being allocated to the subject. States, districts, and schools are devoting plenty of time to it. Georgia and other states have mandated that 90 minutes each day shall be spent on reading in grades one through three. New York City and California have mandated 150 minutes. The state of Arizona suggests that schools may wish to spend 180 minutes a day on reading. Clearly these time allocations would be quite adequate to effect improvements if the classroom time were being well spent.

Just as the time currently spent on reading instruction is suf-

ficient for real progress, so instructional materials for reading are also more than sufficient, at least in bulk, for sponsoring a big improvement in reading scores. Programs that cost publishers tens of millions of dollars to produce and schools hundreds of millions to buy are constantly being upgraded and revised. Young children carry home these weighty, expensive tomes filled with colored pictures. But the guiding ideas behind these programs are almost indistinguishable one from another.

Although the editors of several of these programs have strong credentials in education or psychology, the programs are far from up-to-date with regard to the relevant consensus in cognitive science. For instance, none of them fully reflects the current scientific consensus about the knowledge basis of reading. Cognitive scientists agree that reading comprehension requires prior "domain-specific" knowledge about the things that a text refers to, and that understanding the text consists of integrating this prior knowledge with the words in order to form a "situation model."[25] Constructing this mental situation model is what reading comprehension is. Existing reading programs, while they may pay lip service to this finding about the need for relevant background knowledge, fail systematically to exploit this fundamental insight into the nature of reading.

The reading problem can be solved if our schools begin to follow alternative ideas that stress the importance of a gradual acquisition of broad, enabling knowledge. One aim of this book is to help create a public demand for the kind of knowledge-oriented reading program that is needed. If that demand arises, then the rest can safely be left to the cunning of the market, for most of us in the United States desire the same democratic goal — to give all children an opportunity to succeed that depends mainly on their own talents and character and not on who their parents happen to be. A related aim of the book is to encourage an early curriculum that is oriented to knowledge rather than the will-o'-the-wisps of general, formal skills.

Thus my aims in this book are entirely constructive, despite the

necessary criticisms I must make against inadequate ideas. They are also intensely practical. My call for a revolution in the teaching of subjects related to reading is issued in a period when activities in the elementary grades of the public schools are overshadowed by the provisions of the No Child Left Behind law (NCLB). Because of the exigencies of this law, the time could be ripe for making better ideas prevail.

Most citizens support the goals of NCLB, which was enacted with wide bipartisan support. One of its chief aims is to raise reading achievement and narrow the reading gap between demographic groups. But support for the law has begun to diminish, because it has proved immensely difficult for the schools to fulfill its key requirement that all demographic groups must make "adequate yearly progress" for the schools to qualify for a large annual sum from the federal government — a share of some $12 billion. Since many schools have found it nearly impossible to show adequate yearly progress in reading for all groups, even when subjects like history and science are being neglected to spend more time on reading, there has been an outcry against the act, and also against the yearly tests that measure progress. The U.S. Department of Education has been compelled to soften its requirements.

No situation better illustrates the importance of theories in education than this practical impasse. The legislation was enacted on the theory that if many children are being left behind in reading and if there is a large reading gap between demographic groups, the schools must not be concentrating their efforts properly on those needy children; hence we will build into the act incentives that will induce the schools to focus their efforts more equitably, so that these children will begin to catch up. Note that this theory assumes that the education world actually knows how to improve reading scores for all groups and that incentives must be applied because the schools are simply not putting forth the effort needed to help low-income and minority children.

Since no school wants to be labeled inadequate, the law's provisions have had a tremendous impact on the public schools, well documented in Linda Perlstein's description of the Highland Elementary School in Maryland. Like that school, most schools seem to be trying as hard as they can. They were already instituting many of the reforms that are called for, even before the official provisions of NCLB began to fall due. That is, they have called in outside experts; they have used new curricula in the form of intensive reading programs; they have decreased management authority at the school level, and some districts have entered into contracts with private companies to operate schools that are not making annual yearly progress.

With all this intensive NCLB activity, we might expect a significant change in reading achievement, and gains have indeed been made in the earliest grades, when sounding out (rather than comprehension) is chiefly being tested. But schools are currently having great difficulty meeting annual-yearly-progress requirements, and it is unlikely that we will begin to see significant reading improvement in the next year or so, except for improvements in the teaching of sounding out — of phonics. But the credit for *that* improvement should go to the heroes of the systematic phonics movement, who through their efforts have now brought effective teaching of decoding into many reading programs. This improvement was due to a change of ideas, not to a system of incentives in the new law. The schools are trying very hard, without much success. For them to make real improvements in reading comprehension similar to the improvements in sounding out, they will need better ideas.

By no means should these observations be taken as fundamental criticisms of NCLB and its important aims, which are the same as the aims of this book. It is the most hopeful and important federal education legislation that has been enacted in recent years. The legislators who passed the law can hardly be faulted for assuming that American educational experts possess enough scientific and practical knowledge to attain the goals of the act, so long as the act offered suf-

ficient carrots and sticks. They were right about the inducements. They were wrong about the experts.

The dominant ideas in American education are virtually unchallenged within the educational community. American educational expertise (which is not the same as educational expertise in nations that perform better than we do) has a monolithic character in which dissent is stifled. This is because of the history of American education schools. As Geraldine Clifford, James Guthrie, Diane Ravitch, and others have shown, the history of these schools, which are institutions that train almost all of the teachers and administrators who must carry out the provisions of NCLB, is the history of intellectual cloning.[26] At the beginning of the twentieth century, the parent organism, Teachers College at Columbia University, exported professors and the romantic principles we have discussed, resulting in an intellectual sameness across the nation's education schools. Even today criticism of those fundamental ideas is hard to find in these institutions.

The fate of NCLB and of academic improvement will be decided in the sphere of ideas. American ed school ideas march under the banner of continual reform, but the reform, given different names in different eras, is always the same one, being carried out against the same enemy. The enemy is dull, soulless drill and the stuffing of children's minds with dead, inert information. These are to be replaced by natural, engaging activities (naturalism). A lot of dead information is to be replaced by all-purpose, how-to knowledge (formalism). These are the two perennial ideas of the American educational world. These two principles together constitute a kind of theology that is drilled into prospective teachers like a catechism.

In practice the two principles are not always consistent with each other. As we saw in Ms. Witthaus's class, an adherence to the formalistic idea — the how-to notion of reading comprehension that stresses clarifying, summarizing, questioning — will inevitably lead to drill-like activities, which will be anathematized by the naturalistic

principle that learning should be an engaging activity. This inherent conflict leads in turn to resentment of the idea that the children should be constantly tested, since the new accountability provisions of the law, it is thought, have forced schools to engage in all of this soul-killing drill in clarifying and summarizing. That naturalism and formalism should inevitably be in conflict doesn't, however, mean that either is to be given up as part of the theology that is taught to teachers in our ed schools. The internal conflict between the principles simply generates the need for continual reform, and offers an enemy that is always to be resisted, even when it has been generated by the drills that go with formalistic ideas.

The dominant principles of naturalism and formalism, being opposed to the systematic teaching of a great deal of information, are deadly enemies of the reading goals of NCLB. Advances in reading will depend on students gaining a great deal of information. This conflict of ideas is, then, the root cause of the impasse between the NCLB law and the schools, for the only way to improve scores in reading comprehension and to narrow the reading gap between groups is systematically to provide children with the wide-ranging, specific background knowledge they need to comprehend what they read.

Old people grow blunt; they haven't time for slow niceties. Let me be blunt about the implications of the intellectual history I have traced in this chapter and the implications of this book. If its recommendations are followed, reading scores will rise for all groups of children, and so will scores in math and science, because, as common sense would predict, reading is strongly correlated with ability to learn in all subjects. Equally important, social justice will be served, because the reading gap between social groups will be greatly narrowed by following the book's pro-knowledge recommendations. If you are a teacher, the book's suggestions will help your children. If you are a parent, they will help your child. The book will describe how instructional time can be used most productively, how language

and vocabulary growth can be fostered most effectively, and how the knowledge that is most enabling for reading comprehension can be made an integral part of a child's reading program. If such reading programs were widely used in conjunction with a coherent, knowledge-based curriculum, then reading scores would rise significantly across the nation and across social groups. That would finally defeat the dragon of demographic determinism. It would bring us closer to the ideal of giving all children an opportunity to succeed that depends on their own talents and character rather than on who their parents happen to be. It would make the American future brighter.